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OLYMPIC HERITAGE OR OLYMPIC BURDEN?

A BRIEF ANALYSIS ON THE RELATION BETWEEN OLYMPICS AND SUSTAINABILITY

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*To my parents,
who lovingly taught me important things*

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ABSTRACT

The UN Agenda2030 has marked the beginning of a new era characterized by the idea of “sustainability”. In this context, the organization of Mega Sport Events such as the Olympic Games has become one of the many fields where it’s required to respect some sustainability standards. The scope of this research is to underline how the relation between Olympics and sustainability works by analyzing the official documents released by the IOC. Through a comparative analysis on different Olympic editions, the research will show the difference on what has been affirmed *de jure* and what has been done *de facto*.

LIST OF ACRONYMS

The following table describes the significance of various acronyms used through-out the Thesis. The list order follows the appearance in the text.

| Abbreviation | Description |
|---------------------|--|
| IO | International Organisation |
| WCED | World Commission on Environment and Development |
| GDP | Gross Domestic Product |
| UN | United Nation |
| SDGs | Sustainable Development Goals |
| HR | Human Right |
| HLPF | High-level Political Forum |
| EU | European Union |
| UNGPs | UN Guiding Principles on Business and Human Rights |
| MDGs | Millennium Development Goals |
| WHO | World Health Organization |
| NCDs | Non-communicable diseases |
| UNOSDP | UN Office on Sport for Development and Peace |
| IOC | International Olympic Committee |
| BC | Before Christ |
| NOC | National Olympic Committee |
| ICSD | International Committee of Sport for the Deaf |
| IPC | International Paralympic Committee |
| IF | International Sports Federation |
| OECD | Organisation for Economic Co-operation and Development |
| OGGI | Olympic Games Global Impact |

MEMORANDUM

The aim of this research is to analyse and point out the relation between Olympic Games and sustainability. Beginning with references on how the international panorama is dealing with sustainability, the thesis will go deeper by analysing the position of the IOC from two different point of view: one focuses on the main official documents realised by the IOC in recent years and the second one focuses on a concrete overview on the planning of the Games.

The essay starts by mentioning how international organisations of any kind are dealing with this new prospective of sustainability: from a wider point of view, the one adopted by the UN, to a regional one, the one that regards the EU policy.

The first Chapter highlights how sport can be considered a fundamental tool for reaching the goals of the Agenda 2030. After a brief references on the SDGs that sports can help achieve, it is pointed out the necessity of planning a sustainable mega sports event. Of course, some paragraphs are dedicated to the obstacles that event planners can meet during the organisation.

The second Chapter analyses the work that the IOC has done for helping his stakeholders adopting sustainable strategies and for becoming itself more sustainable. In order to better understand the evolution of the IOC, the Chapter opens with a brief history on the Olympic Games and the IOC. Here, are analysed the main documents released by the IOC during the latest years, notably the five Sustainability Essentials, the How to be a Sustainable Champion Guide and the Carbon Footprint Methodology for the Olympic Game.

With a more pragmatic view, the third Chapter considers the pros and cons of hosting the Olympics. After having analysed the main documents in the previous chapter, this one aims to verify how the actual planning of the Games works by taking into account examples from precedent editions of the Olympic Games. The goal is to prove if there is an actual correlation between what has been affirmed *de jure* and what has been done *de facto*

The research ends with a hope for the future represented by The XXXIII Olympic Games of Paris 2024, which probably will be the most sustainable mega sport event of all times.

INTRODUCTION

From the Seventies, the achievement of the passage from a consumerist economy, based on the culture of having, towards a sustainable economy, has become one of the main goals of every international actor.

After decades of effort in raising living standards conditions, several countries are still handling extreme poverty. It appeared that economic development at the cost of social equity and health did not lead to long-lasting prosperity as was expected. It was necessary to seek out some new ways of harmonization between ecology and prosperity.

In 1987, the World Commission on Environment and Development (WCED) released a Report entitled “*Our Common Future*”,¹ in which guidelines on sustainable development were presented for the first time ever.

The Commission who drew up the Report was named after its President, Gro Harlem Brundtland, former Prime Minister of Norway from 1981 to 1996.

One of the main efforts of the *Brundtland Commission* was to find a common-accepted definition of Sustainable Development, which, at the end, will be famously defined as: “*The development that meets the needs of the present without compromising the ability of future generations to meet their own needs*”.² The report pinpointed five sustainable principles, notably:

1. Holistic strategy-making and planning that links economic, environmental, and social concerns;
2. Relevance of preserving ecological processes;
3. Protection of both human heritage and biodiversity;
4. Research for a supply strategy that can be sustained over the long term for future generations;
5. Better relations between nations.

¹https://en.wikipedia.org/wiki/Our_Common_Future.

² <http://www.un-documents.net/ocf-02.htm>.

The aim was to unify social and economic concerns with environmental ones, recognizing the importance of considering all of them through a systematic and synergic view, in order to find prosperity.

This relation helped to achieve a new definition of progress and wellness, a definition able to overtake the traditional measurement of wealth and economic growth based on the GDP (Gross Domestic Product) index. Sustainable development does not look just towards the profit but towards an improvement in quality of life conditions.

In 2015, 195 nations agreed with the United Nation (UN) on the idea that was necessary to draft guidelines that could help Countries, as well as privates, change the world for the best.

By using the Report as a starting point, the UN has elaborated a document entitled “*Transforming our world: the 2030 Agenda for Sustainable Development*”³, also known as Agenda 2030. The main idea behind the work is that sustainability concerns environmental matters as well as economic and social ones. Hence, derive the idea of having a multidisciplinary and integrate approach for facing important changes in the socio-economic paradigm.

The Agenda 2030 provides 17 Sustainable Development Goals (SDGs) which are defined by the UN as “*the blueprint to achieve a better and more sustainable future for all*”.⁴

These Goals are embedded in a wider action program that detects 169 targets to achieve by 2030. They were established by taking into account the goals presented by the UN Resolution (A/RES/66/288) entitled “*The future we want*”.⁵

This Resolution was a non-binding document elaborated after the UN Conference on Sustainable Development in 2012 in order to replace the *Millennium Development Goals* (MDGs),⁶ goals that were supposed to be achieved by 2015.

Even if MDGs and SDGs are both seen within a strategy towards sustainability they show deep differences, not only regarding the number of the goals presented (the MDGs are 8 while

³ https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.

⁴ <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

⁵ https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_66_288.pdf.

⁶ [https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%20201\).pdf](https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%20201).pdf).

the SDGs are 17) but also regarding who is supposed to achieved them. While the MDGs are differently addressed to developed and developing countries, the SDGs are carried universally.

In short, the 17 SDGs are:

- | | |
|--|--|
| 1. No poverty | 10. Reduced inequalities |
| 2. Zero hunger | 11. Sustainable cities and communities |
| 3. Good health and well-being | 12. Responsible consumption and production |
| 4. Quality education | 13. Climate action |
| 5. Gender equality | 14. Life below water |
| 6. Clean water and sanitation | 15. Life on land |
| 7. Affordable and clean energy | 16. Peace, justice and strong institutions |
| 8. Decent work and economic growth | 17. Partnership for goals |
| 9. Industry, innovation and infrastructure | |

All the SDGs can be clustered into five groups, which constitute “the five Ps” of sustainable development: People, Planet, Prosperity, Peace and Partnership.⁷

All the Countries are committed to define and implementing their own sustainable development strategy and to report their progress to the High-level Political forum (HLPF) that has the duty to examine these reports and asses their progress.

In the latest years, according to the strategy adopted by the UN, the European Union (EU) has supported different projects coherent with both the aims and the values of the Agenda 2030. With the start of Ursula Von Der Leyen’s presidency at the European Commission, the Agenda 2030 has adopted a central role in the European political action.

One of the many achievements towards these goals was the adaptation, by European Commission, of the European Green Deal in 2019.⁸ For helping reach both the goals of the Agenda 2030 and the European Green Deal, the EU has adopted the EU Directive on Non-Financial Reporting (2014/95/EU),⁹ which establishes new reporting minimum standards in

⁷ https://www.unescwa.org/sites/default/files/inline-files/the_5ps_of_the_sustainable_development_goals.pdf.
⁸ https://ec.europa.eu/info/sites/default/files/european-green-deal-communication_en.pdf.
⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0095>.

environmental and social matters, in relation with human resources, fight against bribery and respect of Human Rights.

This Directive aims to implement virtuous behaviour and to increase transparency in non-financial statements in companies' annual reports. This Directive helps companies to measure, understand and communicate their impact on human rights and environment.

The Commentary to the UN Guiding Principles on Business and Human Rights (UNGPs) notes: *“The responsibility to respect human rights requires that business enterprises have in place policies and processes through which they can both know and show that they respect human rights in practice. Showing involves communication, providing a measure of transparency and accountability to individuals or groups who may be impacted and to other relevant stakeholders, including investors. Formal reporting is itself evolving, from traditional annual reports and corporate responsibility/sustainability reports, to include online updates and integrated financial and non-financial reports. Formal reporting by enterprises is expected where risks of severe human rights impacts exist, whether this is due to the nature of the business operations or operating contexts. The reporting should cover topics and indicators concerning how enterprises identify and address adverse impacts on human rights. Independent verification of human rights reporting can strengthen its content and credibility. Sector-specific indicators can provide helpful additional detail”*.¹⁰

For now, the Directive 2014/95/EU regards only public-interest companies with more than 500 employees but the EU has already expressed its will to extend the target of interest to all the companies, no matter whether they are public or private.

In 2016, a step forward has been made by Italy with the adoption of the Legislative Decree No 254/2016.¹¹ With this Legislative Decree, Italy has extended the application of the Directive 2014/95/EU to: *“Large Corporations [...] in which the consolidated financial statement meets at least one of the following criteria: 1) total assets in the balance sheet exceeding 20,000,000 euros and 2) total net revenue from sales and services exceeding 40,000,000 euros”*.¹²

¹⁰ https://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf#page=28.

¹¹ <https://www.assolombarda.it/servizi/credito-e-mercati-finanziari/documenti/decreto-legislativo-254-2016-sulla-comunicazione-di-informazioni-non-finanziarie>.

¹² Legislative Decree No 254/2016, Art. 1 §b.

1. The importance of sport in our lives

Sport can be defined as “*all forms of physical activity that contribute to physical fitness, mental well-being and social interaction, such as play, recreation, organized or competitive sport, and indigenous sports and games*”.¹³ Regardless the definition we give, sport represents a universal and powerful language capable of gathering different people, culture and gender.

In June 2018, the World Health Organization (WHO) adopted the Global Action Plan on Physical Activity 2018-2030, entitled “*More Active People for a Healthier World*”.¹⁴

The mission of the Plan was, and still is “*to ensure that all people have access to safe and enabling environments and to diverse opportunities to be physically active in their daily lives, as a means of improving individual and community health and contributing to the social, cultural and economic development of all nations*”.¹⁵

Sport plays a key role in the prevention of non-communicable diseases (NCDs)¹⁶ such as stroke, heart disease, breast and colon cancer and diabetes. It also prevents obesity and other kinds of physical diseases.

However, sport is not just a tool for improving better physical conditions, it has important impacts also on mental health, well-being and life condition. Going beyond the simple use of sport as a tools for improving one’s physical well-being, it is possible to recognise how, over time, sport has also played a decisive role in promoting better mental well-being. Since Greek times, it has been highlighted, through the term *kalogathia*¹⁷ the fundamental link between what is “beautiful” and what is “good”.

Decimo Giunio Giovenale (Aquino 55 a.C. – 135-140 a.C.) was an important latin poet who became famous for his aphorism “*mens sana in corpore sano*” which is nowadays used for

¹³ <https://www.amun.org/sports-as-a-tool-for-peace/>.

¹⁴ <https://apps.who.int/iris/bitstream/handle/10665/272722/9789241514187-eng.pdf>.

¹⁵ Global Action Plan on Physical Activity 2018-2030, page 20.

¹⁶ Non-communicable diseases are diseases that are not transmissible directly for one person to another. NCDs include Parkinson’s disease, most cancers, Alzheimer’s disease...

¹⁷ <https://it.wikipedia.org/wiki/Kalokagathia>.

underline that for having healthy faculties of the soul, one must also have healthy faculties of the body in virtue of the psychophysical unity.

Sport teaches us how to behave whether we are losing or winning, it helps building strong social links and improving cooperative learning skills. Sport is a vehicle for inclusion, it plays a fundamental social role as a tool for education and training and allows the development of essential social skills.

Many international organizations have commissioned studies focused on the economic impact of sport.

In 2007, the EU Commission has drafted the White Paper on Sport¹⁸ where after having analysed *the societal role of sport*, the focus shifts on *the economic dimension of sport*. The Paper presents a study, conducted by the Austrian Presidency in 2006, in which it is suggested that “*sport generated value-added of 407 billion euros in 2004, accounting for 3.7% of EU GDP, and employment for 15 million people or 5.4% of the labor force*”.¹⁹ With a different perspective, the economic impact of sport can be analyzed not in terms of revenue but in terms of public spending, by taking into account the public cost of inactivity.

The World Health Organization estimated that the “*global cost of physical inactivity is INT\$ 54 billion per year in direct health care, in 2013, with an additional INT\$ 14 billion attributable to lost productivity. Inactivity accounts for 1–3% of national health care costs, although this excludes costs associated with mental health and musculoskeletal conditions*”.²⁰

Despite general positive opinions on sport benefits, in recent years, the number of people who actually exercise or play sport is increased less quickly as it was expected. Under the will of the EU Commission, in 2018 was published the Special Eurobarometer 472 on “*Sport and physical activity*”,²¹ a survey conducted in the 28 EU Member States in December 2017.²²

¹⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52007DC0391&from=CS>.

¹⁹ D. Dimitrov / C. Helmenstein / A. Kleissner / B. Moser / J. Schindler: Die makroökonomischen Effekte des Sports in Europa, Studie im Auftrag des Bundeskanzleramts, Sektion Sport, Wien, 2006.

²⁰ <https://apps.who.int/iris/bitstream/handle/10665/272722/9789241514187-eng.pdf>.

²¹ <https://www.europarc.org/wp-content/uploads/2020/01/Special-Eurobarometer-472-Sports-and-physical-activity.pdf>.

²² The survey was conducted before Brexit, the actual number of EU Member States is 27.

By using a questionnaire as method of investigation, the collected data have been used by the EU as guidelines towards address its policy.

As shown in the table below (*Table 1*), the 46% of Europeans said that they had never exercised or played sport, while the 14% declared to have done so, seldom. As we can deduct from *Table 1*, women are less likely than men to practice sport and as could be expected, the frequency of practice sport or any other physical activity tends to decrease with increasing age. Form *Table 1* it is possible to deduct that, contrary to popular opinion, inactivity is not due to laziness but it depends more on socio-cultural factor such as education and socio-professional category:

- The 73% of people who drop out school by the age of 15 say they have never played sport while “only” the 31% of people who finished education at the age of 20 declare the same;
- The 26% of manager have never played sport, compared with the 37% in white-collar jobs, 36% of self-employed people and 49% of manual workers.

| | Regularly | With some regularity | Seldom | Never | Don't know |
|------------------------------------|-----------|----------------------|--------|-------|------------|
| EU28 | 7 | 33 | 14 | 46 | 0 |
| Gender | | | | | |
| Men | 8 | 36 | 16 | 40 | 0 |
| Women | 7 | 29 | 12 | 52 | 0 |
| Age | | | | | |
| 15-24 | 9 | 53 | 14 | 24 | 0 |
| 25-39 | 6 | 40 | 19 | 35 | 0 |
| 40-54 | 7 | 32 | 17 | 44 | 0 |
| 55 + | 8 | 22 | 9 | 61 | 0 |
| Gender and Age | | | | | |
| Men 15-24 | 12 | 59 | 14 | 15 | 0 |
| Men 25-39 | 6 | 45 | 21 | 28 | 0 |
| Men 40-54 | 6 | 35 | 20 | 39 | 0 |
| Men 55+ | 8 | 22 | 12 | 58 | 0 |
| Women 15-24 | 6 | 47 | 14 | 33 | 0 |
| Women 25-39 | 4 | 36 | 17 | 42 | 1 |
| Women 40-54 | 7 | 29 | 14 | 50 | 0 |
| Women 55+ | 7 | 21 | 8 | 64 | 0 |
| Education (End of) | | | | | |
| 15- | 6 | 14 | 7 | 73 | 0 |
| 16-19 | 6 | 27 | 15 | 52 | 0 |
| 20+ | 9 | 43 | 17 | 31 | 0 |
| Still studying | 10 | 63 | 11 | 16 | 0 |
| Socio-professional category | | | | | |
| Self-employed | 7 | 39 | 18 | 36 | 0 |
| Managers | 7 | 46 | 20 | 26 | 1 |
| Other white collars | 4 | 40 | 19 | 37 | 0 |
| Manual workers | 6 | 29 | 16 | 49 | 0 |
| House persons | 5 | 18 | 10 | 67 | 0 |
| Unemployed | 10 | 26 | 14 | 49 | 1 |
| Retired | 8 | 20 | 9 | 63 | 0 |
| Students | 10 | 63 | 11 | 16 | 0 |
| Difficulties paying bills | | | | | |
| Most of the time | 4 | 19 | 11 | 66 | 0 |
| From time to time | 5 | 24 | 15 | 55 | 1 |
| Almost never/ Never | 8 | 37 | 14 | 41 | 0 |

Table 1: QB1 “How often do you exercise or play sport?” (% -EU).
Sources: Special Eurobarometer 472, page 12

Despite the increasing attention on the role of sport in our lives, “*nearly half of Europeans never exercise or play sport, and the proportion has increased gradually in recent years*”.²³

The future goal is to increase the percentage of population who exercise or play sport and is the task of the States to make sure that gender, education and socio-professional category won't represent an obstacle.

2. Sport as a tool for sustainable development

Today, the world is facing significant challenges across a wide spectrum of environmental, economic and social matters. With the developing of these challenges, public opinion has increased its concern and tried to find a solution that would take into account all aspects. This attempt was translated in more interest in the approach of sustainability.

Considering that the term sustainability refers to a multi-disciplinary approach, it is easy to see how phenomena, which at first sight may be thought of as not inherent, are in fact closely connected to this world. In recent years, more and more scholars have tried to identify what these phenomena are, in order to develop an all-round sustainable policy. Today, it is well established that the sports phenomenon is a fundamental tool for sustainable development.

As Audrey Azoulay, General Director of UNESCO, said on occasion of the International Day of Sport for Development and Peace in 2021: “*The role of sport in sustainable development is based on the values it embodies. In a context of tension and inequalities, sport has a unique capacity of bringing our societies together, to unite them in shared emotions and to transmit the values of inclusion, solidarity and mutual respect. At a time when we need to redouble our inventiveness in order to rebuild the future, sport reminds us of our ability to surpass ourselves, to go ever further*”.²⁴

In 2003, the UNOSDP (UN Office on Sport for Development and Peace)²⁵ published a Report (*Sport and SDGs: an overview outlining the contribution of sport to the SDGs*)²⁶ focused on the link between sport and SDGs.

²³ Special Eurobarometer 472, 2017, Sport and physical activity, page 12.

²⁴ https://unesdoc.unesco.org/ark:/48223/pf0000376674_eng.

²⁵ The UNOSDP was introduced by Kofi Annan in 2001 and closed on 4th May 2017.

²⁶ <https://www.sport-for-development.com/imglib/downloads/unosdp2014-sport-and-the-sustainable-development-goals.pdf>.

The aim of the Report was to inform, inspire and encourage sport's contribution to the SDGs by relevant stakeholders (such as States and IO). The Report presents for each Goals a list of action that can contribute directly to the achievement of the goal. Below a list of the most significant ones:

– SDG 3: Ensure healthy lives and promote well-being for all, at all ages

Physical inactivity is considered the fourth leading risk factor for global mortality.²⁷ Scholars agree on the idea that sport offers a cost-effective, impactful and scalable tool within preventive health policy and strategy. It has been estimated that 5.5 million deaths per year could be prevented if people were sufficiently active.²⁸ Sport can improve self-esteem and fewer depressive symptoms. It can contribute to provide a valuable platform for community health messaging and education.

The key place for starting to maximise the contribution of sport and physical activity in accordance with SDG 3 is for public health stakeholders to consider prevention as a fundamental pillar of public health. An important changing has to be made in the way people think about medicine, from a medicine of *after* to a medicine of *before*.

– SDG 5: Achieve gender equality and empower all women and girls

Gender equality and women's empowerment have been recognised as fundamental tools of sustainable development and over the past years, scholars highlighted that sport can play an important role for developing these two aspects.

Sport is a “*social and cultural process in which social constructions of masculinity and femininity play a key role*”.²⁹ In relation to gender issues, sport (inasmuch as social phenomenon) has different impacts; it can have a positive impact on gender equality as well as contribute to negative stereotypes of women's physical abilities. Sadly, women's sport receives less media coverage than men's sport and, in many cases, when they are presented, they are overtly sexualised. As any discussion on gender equality, is important that sport-based

²⁷ According to the WHO Report 2010, the major risk factors are: 1 tobacco use, 2 the harmful use of alcohol, 3 raise blood pressure, 4 physical inactivity, 5 raised cholesterol, font <https://www.who.int/publications/i/item/9789241564021>.

²⁸ [https://inactivity-timebomb.nowwemove.com/download-report/The%20Economic%20%20Costs%20of%20Physical%20Inactivity%20in%20Europe%20%20\(June%202015\).pdf](https://inactivity-timebomb.nowwemove.com/download-report/The%20Economic%20%20Costs%20of%20Physical%20Inactivity%20in%20Europe%20%20(June%202015).pdf).

²⁹ www.oecd.org/dac/gender-development/44896326.pdf.

approaches are not limited to women and girls programmes only. Thankfully, in recent years, the profile of female athletes has grown and recent data underline an increasing in women participation in the leadership of sport. Reach gender equality through sport does not mean treat different gender in the same way but recognise differences on how people experience sport and guarantee the equal accessibility.

- SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Sport can contribute to economic development and creating employment opportunities. In the last few years, sport industry has grown, in particular due to a positive impact on sectors such as tourism, healthcare, education and economic activity. In many communities, sport develops the culture of volunteerism, which in turn helps improve employability.

- SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable

The Goal n. 11 represents a clear example of an evolving global development agenda.

Experts believe that the provision of public structures where people can gather and pedestrian friendly streetscapes can promote social connectivity and diversity. Sport can contribute to *“enhancing inclusive and sustainable urbanisation and capacity for participatory, integrated and sustainable human settlement planning and management”*.³⁰

Major sporting events represents a high-profile example of a place-based approach to exploit the power of sport in development.

Certainly, sport can also help reaching others SDGs. According with SDG 6 (*Ensure availability and sustainable management of water and sanitation for all*), sport can be used as a platform to spread messages on water sanitation requirements and management. It can support the creation of safe, cohesive and green settlements, which are usable for sport and other physical activities (SDG 12: *Ensure sustainable consumption and production patterns*).

In this Chapter, after having analysed the positive impact of sport in our lives, it has been pointed out the deep link between sport and SDGs. Said so, the question now is: if is it true,

³⁰ www.un.org/ga/search/view_doc.asp?symbol=A/69/L.85&Lang=E.

at least *de jure*, that sport represents a valid tool for reaching the SDGs, is also true that, *de facto*, sport world is adopting decisions coherent with these goals?

The aim of the next chapters is to analyse the International Olympic Committee's policy on sport for sustainable development using two different approaches: theoretical and practical.

The theoretical approach will be used for understanding and knowing the policies elaborated by the IOC while the practical approach will serve to compare the formal position of the IOC and the effective organisation of the Olympic Games.

3. Sustainable mega sport events

While talking about sport as a tool for fostering and reaching the SDGs, it is indispensable to have in mind that we are not just adopting the term "sport" *strictu sensu*, as a physical activity, but we are calling all of the different aspects that this term evokes.

Since sport has ever been linked with the idea of competition and since the main competitions took place at a particular time and in a determined place, the organisation of Sustainable Mega Sport Events has taken on a crucial role. By looking at the historic development of sustainable mega sport events, one can see that it is a relatively new practice since the IOC, who is indicated of being the initiator, has started to work only in the late 90s. The importance that mega sport events have taken on in terms of sustainability depends on their ability of being a window through which people perceive and observe sport, whether by being physically present or as a remote spectators. As such, sport events represent a huge opportunity for inspiring sport fans, and more, in developing a culture of sustainability.

Falling back on the UN definition of sustainability, every event, in order to be *sustainable*, needs to address all the three aspects of economic, environmental and social issues.

- Economic aspect: every event contributes to the development of the enterprises in the region in which it takes place thanks to the demand of goods and services linked with the event and thanks to the indirect demand associated with the wheat of a series of needs such as transportation, catering, shopping etc. Obviously, the increasing of the demand produces positive spill-over effects. It also develops new economic activities (and therefore it creates work-offers) that can be preserved in the long term.

- Environmental aspect: planning of a sustainable event requires the use of energy and material resources, therefore, it has some direct/indirect, positive/negative impacts on the environment; thereby event planning focusses on the preservation and conservation of natural environment by trying to minimize pollution and other negative externalities.
- Social aspect: alongside the work-offers create by the event, the sport-event, based on ethical and equitable principles, helps to spread ideas such as the respect of human rights, equal opportunity employment and fair-play. Moreover, an event is social sustainable when it has been organised by taking into account some international sustainable standards concerning the certificated suppliers who respect labour-rights.

Said so, the goal of event planners should be to organise an event capable of respecting the idea of sustainability, meaning that the event should not contribute to environmental degradation, economic adversity and social inequalities.

Some of the many advantages in adopting a sustainable approach while planning an event are the minimising of the cost, thanks to a rational use of energy and products; a reduction of CO2 emission and brand-reputation amelioration. Commercial sponsors prefer organisations that share the same values and are complementary to their brand reputation. Following a sustainability path should put any organisations in a better place in terms of understanding and anticipating regulatory requirements, it represents a form of cost saving.

In recent years, numerous guides, standards and certification programmes have been developed by different International Organisations for the sake of assisting event planners developing sustainable events. Some of these documents are designed for events of any type and scale while others have a more specific focus. In 2012 the ISO20121 was adopted.³¹ This document consists in a set of international sustainable standards having the aim of supporting and regulating event organisation. In 2012, during the planning of the London Olympic Games, the system of ISO20121 was used for the first time ever.

³¹ https://www.iso.org/files/live/sites/isoorg/files/store/fr/PUB100302_fr.pdf.

4. Difficulties while organising a mega sport events

If organising sustainable Mega Sport Events was easier, all the events would have been sustainable, however, while trying to reach and respect the global standards on sustainability, event planners face different problems.

One of the first limits could be the time. The limit of time could be analysed under a dualistic prospective: from the point of view of the timeline that has to be respected for organising the event and from the point of view of the event's legacy. That means that while planning an event both the dimension of present and future should be taken into account.

The problem is that sometimes the satisfaction of certain needs requires quick action in the short term that does not take into account the consequences in the long term. Making things faster may lead to a lower quality of the Event and, in the race; some aspects concerning environmental and social issues may be pushed aside.

The ethical problem plays, as well, an important role during the organisation of the events. Since Ethics represents the branch of philosophy that “*involves systematizing, defending, and recommending concepts of right and wrong behaviour*”³² and since each community has developed a relative prospective of what is good and what is evil, the organisation of a Mega Sport Event under a common moral is almost impossible. Consequentially the event planners have to make decisions in such a way that doesn't discriminate anyone. Some choices can be seen to be easy to take but sometime also deciding the day of the event can lead to problems (and that is mainly due to the religious factor).

The ethical problems is not limited only to the question concerning the good and evil but it also involves all the questions linked to the transparency, repudiation of corruption, conflict of interest, protection of competition and more.

Money plays an important role too. If money are not the main factor behind an event, it is sure that without money the organisation of an event is difficult, if not impossible. If in past years it was possible to organize mega-events on a limited budget, it was because some of the standards that event organizers have to meet today were not mandatory.

³² <https://iep.utm.edu/ethics-and-contrastivism/>.

Choosing sustainable materials both in the construction of infrastructure and in packaging/gadgets requires a not-insignificant financial effort, so that sometimes *green choices* are in fact only *economic choices*. Being sustainable means also respect the international legislation on labour right and guaranteeing gender equality.

Another problem can be seen in what the scholars have defined as *resistance to change*.

This internal resistance derives from the idea that every changing leads to bad consequences. Being afraid of unknown is one of the things that stop progress by hindering human actions. The resistance to change works also under the idea that what it is supposed to be done “*it is not important*” because “*we are already doing enough*”.³³

³³ Sustainability Essentials, page 21.

Chapter II: IOC SUSTAINABILITY PROGRAM

1. The international Olympic Committee

According to tradition, the first Olympic took place in 776 b.C. in Olympia (ancient Greece). At the beginning, the Olympic Games were of high religious importance to the Greek population since they were celebrated in honour of Zeus.

The Games took place every four years and they gathered people from all the Greek *polis*. Throughout the period of the Olympics (5 days) it was in force the *Olympic Truce*, meaning that for all the duration of the games, every war was forbidden and every player who was supposed to cross enemy territory benefited of an “immunity of passage”.

In 393 b.C., after 292 editions of the Olympic Games, the Roman Emperor Theodosius abolished the Games. Theodosius adopted the Christianity as the state religion and since the Olympics were celebrated in memory of pagan God, he decided to wipe them out.³⁴

After the French defeated during the Franc-Prussian war (1870-1871), the Baron Pierre de Coubertin,³⁵ motivated by the desire of finding a way to bring nations closer, to allow young people to confront each other at the international level through sport rather than war, decided to found, in 1894, the International Olympic Committee (IOC)³⁶. In 1896, the first Modern Olympics took place in Athene and in 1924 the first Olympic Winter Game was celebrated in Chamonix, France.

The IOC is a non-governmental not-for-profit organisation based in Lausanne (Switzerland), which, from 2009, has the status of observer at the UN General Assembly. From 2013, the president is the German Thomas Bach.

³⁴ <https://www.history.com/topics/sports/olympic-games#:~:text=The%20Olympic%20Games%2C%20which%20originated,the%20world's%20preeminent%20sporting%20competition.&text=The%20first%20modern%20Olympics%20took,nations%2C%20competing%20in%2043%20events>.

³⁵ Charles Pierre de Frédy, Baron de Coubertin, known as Pierre de Coubertin (1863-1937), was a French sports director, pedagogue and historian, known for being the founder of the modern Olympic Games.

³⁶ From the original French name: Comité International Olympique.

The IOC's principal role is to organise the Olympic Games but it also to accomplish crucial action for coordinate the National Olympic Committees and other organisations that together constitute the Olympic Movement.

The IOC's purposes are:

1. to encourage and support the promotion of ethics and good governance in sport as well as education of youth through sport [...];
2. to encourage and support the organization, development and coordination of sport and sports competitions;
3. to cooperate with the competent public or private organizations and authorities in the endeavor to place sport at the service of humanity and thereby to promote peace;
4. to act against any form of discrimination affecting the Olympic Movement;
5. to encourage and support the promotion of women in sport at all levels and in all structures with a view to implementing the principle of equality of men and women;
6. to protect clean athletes and the integrity of sport, by leading the fight against doping, and by taking action against all forms of manipulation of competitions and related corruption;
7. to encourage and support measures relating to the medical care and health of athletes;
8. to oppose any political or commercial abuse of sport and athletes;
9. to encourage and support a responsible concern for environmental issues, to promote sustainable development in sport and to require that the Olympic Games are held accordingly;
10. to encourage and support initiatives blending sport with culture and education;
11. and more on.³⁷

By giving a look at point number 5, 6 and 9, it is possible to affirm that even before the international scene has become aware of the issue and of the deep link between sport and sustainable development, the IOC had already taken this path.

³⁷ Olympic Charter Mission and role of the IOC, pages 13-14.

In 1908, the IOC adopted the Olympic Charter³⁸, a codification of the fundamental principles of Olympism. As can be seen by reading the introduction, the Charter has the purposes to recalls the Fundamental Principles of Olympism, to give a basic statute to the Olympic Committee and to define the mutual rights of the three main components of the Olympic Movement (International Olympic Committee, the International Federations and the National Olympic Committees).

2. Games for all

In parallel with the organization of the Olympic Games and under the idea of inclusiveness, the IOC has developed different type of Games in such a way as to make the Olympic Games, games for all.

In particular, since its origin, the IOC has recognized different international competitions able to respect this idea of inclusivity, the main ones area the Deaflympics, the Special Olympics World Games and the Paralympic Games.

The Deaflympics³⁹ are organized by the International Committee of Sports for Deaf (ICSD), and they took place for the first time in Paris in 1924.⁴⁰

The Game consists of a periodic series of multi-sport events in which deaf athletes compete at high level. They are held every four years and represent the longest running multi-sport event in history, after the Olympics.

Born from the idea of Eugène Rubens-Alcais (1884-1963)⁴¹, himself deaf and at that time President of the French Deaf Sport Federation, their importance is due to the fact that they represent the first international sport event ever created for athletes with disabilities. Eugène aim was to change the common idea based on a view of deaf people as intellectually inferior and linguistically impoverished.

³⁸ The French original name was “*Annuaire due Comité International Olympique*”, the actual name, Olympic Chart, was adopted in 1978. Last version of the Chart (August 2021): https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/General/EN-Olympic-Charter.pdf?_ga=2.44909220.1806718809.1646303217-546605108.1640074831.

³⁹ The original name of the Games was “Silent Games”, <https://www.deaflympics.com/icsd/history>

⁴⁰ <https://www.deaflympics.com/icsd>.

⁴¹ https://fr.wikipedia.org/wiki/Eug%C3%A8ne_Rubens-Alcais.

The Deaflympics are distinguished from all other IOC Games by the fact that they are organized and run exclusively by members of the deaf community.

The Special Olympics World Games (Special Olympiad) are an international sporting competition for athletes with intellectual disabilities, organized by the IOC-recognized Special Olympics Organization.

They took place every two years and alternate, as it is for the Olympic Games, between Summer and Winter Games. The first Game was held in Chicago, Illinois, in 1968.⁴² The Special Olympics were officially recognized by the IOC in 1988.

The Paralympic Games, also known as Paralympics, are a period series of international multi-sport events involving athletes with a range of physical disabilities such as paraplegia, muscular dystrophy, amputation, vision impairment and so on.⁴³

All Paralympic Games are governed by the International Paralympic Committee (IPC), an international non-profit organization headquartered in Bonn, Germany.

The idea of opening the Games to people affected by some physical problems showed up after the World War II, however at that time, the principle aim was to assist the large number of veterans and civilians who had been injured during the War.

Sir Ludwig Guttman (1899-1980)⁴⁴ is considered the father of this movement. He believed in the idea that sport can represent an important method of therapy for people affected by physical disabilities.

In 1952, he organized the Stoke-Mandeville Games for the Paralyzed, the Games were held on the ground of a war-veteran-hospital and they counted the participation of more than 130 athletes from all over the world.

During the course of the Olympic Games in Rome, in 1960, more than 400 athletes with disabilities gathered at the Olympic Stadium just the day after the conclusion of the Summer

⁴² <https://www.specialolympics.org/about/history?locale=en>.

⁴³ https://en.wikipedia.org/wiki/Paralympic_Games.

⁴⁴ https://en.wikipedia.org/wiki/Ludwig_Guttman.

Olympic Games XVIII for competing in different sports such as snooker, swimming, fencing, shot put, table tennis and javelin.⁴⁵

The first Summer Paralympic Game was held in Seoul (South Korea), in 1988. In June 2001, the IOC and the IPC signed an agreement that would ensure that the staging of the Paralympic Games is automatically included in the bid for the Olympic Games. This agreement came into effect at the Paralympic Summer Games in Beijing 2008.

The word “Paralympic” derives from the Greek preposition “para”, *beside* or *alongside*, and the word “Olympic”, this for underline the connection between the two Games since the Paralympics are the parallel Games to the Olympics.

The IOC stated in its Charter that: *“the practice of sport is a human right. Every individual must have the possibility of practicing sport, without discrimination of any kind and in the Olympic spirit, which requires mutual understanding with a spirit of friendship, solidarity and fair play [...]. Any form of discrimination with regard to a country or a person on grounds of race, religion, politics, gender or otherwise is incompatible with belonging to the Olympic Movement”*.⁴⁶ Despite the absence of a clear and direct reference to the discrimination related to disability, it is reasonable to infer that the IOC is against the discrimination on the basis of disability since it would be against the spirit of the Olympic Charter.

3. IOC sustainability policy and strategy

We have already seen the importance of sport for developing and implementing the Agenda 2030. In the latest years, the IOC has decided to elaborate its own sustainability strategy in order to remark its commitment to achieving the SDGs.

All the IOC’s policy and action is based on the principle of Olympism, which is *“a philosophy of life, exalting and combining in a balanced whole the qualities of body, will and mind. Blending sport with culture and education, Olympism seeks to create a way of life based on*

⁴⁵ <https://www.pbs.org/wgbh/medal-quest/past-games/#:~:text=The%20Stoke%2DMandeville%20Games%20for,Mandeville%20Hospital's%20Spinal%20Injuries%20Unit.>

⁴⁶ <https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/Olympic-Studies-Centre/List-of-Resources/Official-Publications/Olympic-Charters/EN-2010-Olympic-Charter.pdf> , IOC, 2010, page 11.

*the joy of effort, the educational value of good example, social responsibility and respect for universal fundamental ethical principles”.*⁴⁷

The IOC agrees with the idea the sport has to be used as a tool “*at the service of the harmonious development of humankind, with a view to promoting a peaceful society concerned with the preservation of human dignity*”.⁴⁸

By having these basic ideas, the IOC is aware of his own responsibility in making the world a better place through sport and that is probably why sustainability represents, together with credibility and youth, one of the three pillars of the Olympic Agenda 2020.⁴⁹

This Agenda pinpoint the three points of view from which the IOC itself is an important actor for reaching sustainability goals:

- The IOC as an organization: capable of embrace sustainability principles in its daily operations;
- The IOC as owner of the Olympic Games: responsible of developing a proactive leadership in terms of sustainability and to ensure that all sustainable aspects of organizing the Games are respected;
- The IOC as leader of the Olympic Movement: has the duty of helping its own stakeholders in integrating sustainability within their organizations.

The core of the IOC’ strategy is based on five focus areas deeply inter-related, notably: Sourcing and Resource Management; Infrastructure and Natural Sites; Mobility; Workforce and Climate.⁵⁰ The IOC is also bound to complying with some legal requirements and ethical principles, such as:

- Integrity: coherence with ethical principles;
- Inclusivity: fair treatment and involvement of all interested parties;

⁴⁷ Olympic Charter, page 8, Fundamental Principles of Olympism §1.

⁴⁸ Olympic Charter, page 8, Fundamental Principles of Olympism §2.

⁴⁹ IOC sustainability policy 2017:

https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/IOC-Sustainability-Policy.pdf?_ga=2.207995858.1144528344.1658914986-1240183690.1653396533.

⁵⁰ Introduction to Sustainability, pag. 13:

https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/sustainability-essentials/IOC-Sustainability-essentials_v7.pdf#_ga=2.210552789.1144528344.1658914986-1240183690.1653396533.

- Stewardship: taking responsibility for one’s actions;
- Transparency: openness about activities and decisions that affect society.

From 2015-2016, in order to respect its role as point of reference, the IOC has begun to regularly publish a series of guides with the aim of providing practical and simple information on sustainability for all of its stakeholders (in particular for NOCs and IFs) to be better able facing the complexities of the subject and developing their own sustainability programs.

The so called *Sustainability Essentials* are five different documents each of which focus on a different aspect:

1. Introduction to Sustainability;
2. Sports for Climate Action⁵¹;
3. Sustainable Sourcing in Sport⁵²;
4. Plastic Game Plan for Sport⁵³;
5. Sustainability Management in Sports⁵⁴.

The first guide, *Introduction to Sustainability*, shows a general overview on sustainability by taking into account what it means, why it is important and what an organization can do to help. Usually, sports organizations have already taken actions in this way, typically with double plan of action based on social responsibility projects and greening initiatives, however, this is not enough. This document is a helpful guide for all the organizations willingly to take their own first steps in the field of sustainability by answering at the question: “What would a truly sustainable NOC or IF look like?”

⁵¹Sports for Climate Action:

https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/sustainability-essentials/SUSTAINABILITY-ESSENTIALS-ISSUE-2.pdf?_ga=2.2417520.1144528344.1658914986-1240183690.1653396533.

⁵²Sustainable Sourcing in Sport:

https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/sustainability-essentials/SUSTAINABILITY-ESSENTIALS-ISSUE-3-final.pdf?_ga=2.210733013.1144528344.1658914986-1240183690.1653396533.

⁵³ Plastic Game Plan for Sport:

https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/Plastic-game-plan-for-sport-guide.pdf#_ga=2.210733013.1144528344.1658914986-1240183690.1653396533.

⁵⁴ Sustainability Management in Sport:

https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/sustainability-essentials/SUSTAINABILITY-ESSENTIALS_v6.pdf?_ga=2.210733013.1144528344.1658914986-1240183690.1653396533.

Created from the collaboration with the UNFCCC (UN Climate Change), the second guide, *Sports for Climate Action*, provides a general understanding on the principal issues related to climate change by setting out how the world of sport can reduce its climate impact.

Climate change is related with sports world towards a dualistic prospective.

First, frequent floods, rising sea levels and higher temperature determine where and when sport can be played since game seasons are changing and playing surfaces are being lost.

Second, sport can't be considered just as a victim of climate change; it also has the collateral effect of increasing the number of greenhouse gases into atmosphere. Due to these two prospectives, the IOC's policy is focused on two strategic intents: adaptation to the consequences of climate change and direct reduction of greenhouse gas.

The event-planner's action is divided in a tripartite plan of action based on: a take of consciousness on the organization's current level of greenhouse gases by establishing a baseline carbon footprint; implementation and actuation of concrete action; diffused information about what has been done.

The third guide, *Sustainable Sourcing in sport*, has the aim to help Olympics' stakeholders in adopting more sustainable sourcing practices. This third guide helps to understand how the choice of which goods and services rent or buy, impacts the environment.

Many event planners believe that a more efficient and "no-impact" event is expensive, however by improving efficiency the cost can decrease.

Since plastic pollution has a direct impact on sports practice, the IOC dedicates an entire guide on this topic.

The fourth guide, *Plastic Game Plan for Sport*, offers helpful instructions on how the problems related with plastic and waste can be tackled during the development of sports events.

Sport represents a window through which important values such as integrity and respect can enter into everyone's life, that means that a good behavior in the consumption and use of plastic during the organization of an event can have a good impact on sports fans.

During the planning of a sports event, important decisions can be taken considering the use (or not) of plastic. It is true that sometimes becomes hard giving up plastic since most of the

single-use tools are made of plastic, however, with the right planning, you can choose to replace them with non-single-use or with re-wash items.

The IOC has subdivided the plan into five different ways of action. First, *refuse* to use single-use items; second, when it is necessary to use plastic, *reduce* it; third, chose *reuse* items such as reusable plates, cutlery and cups and establish a take-back system; fourth, *replace* plastic items with plastic-free or easy-to-recycle items; fifth, prefer materials that ca be *recycled*.

The fifth guide, *Sustainability Management in Sports*, represents a useful tool for IFs and NOCs to integrate a sustainable approach in their daily operations.

Sustainability needs to be integrated into events planning with a 360° view on the topic for avoiding problems concerning the gap between strategy and action. The action plan provided by this guide is focused on four different issues: securing a connection to action; setting sustainability priorities; delivering sustainability and reviewing and reporting progress.

Each organizations have its own *management system*, that according with ISO 2012:2012 is “*a set of interrelated or interacting elements of an organization to establish policies and objectives and processes to achieve those objectives*”.⁵⁵

Since the idea of event sustainability management has become widespread, the IOC requires all host city to be certified to ISO 20121 standard at least three years before their Games. This guide does not want to replace the ISO 20121 but if followed, it helps achieving the ISO 20121 standards faster and easier.

This guide clarifies once and for all that the problem of high cost of a sustainable approach is just an excuse taken by the event planners for not adopting it, considering that improved efficiency can lower the costs. Sustainability implies a look towards the future because sometimes the benefits, in terms of spending, can be seen only in a long-term situation.

It also points out that not every choice has to be driven by money because not all the benefits can be monetarized in the classic sense. Business needs more than the classic economic balance for measuring his success and performance.

⁵⁵ https://www.iso.org/files/live/sites/isoorg/files/store/fr/PUB100302_fr.pdf.

Organizations need to be in compliance with the law for improving their sustainability performances. Relevant legislative topics may include: hygiene, waste, climate change, energy, transport, air quality and wildlife protection.

Once all the obligations are pulled together, it is possible to determine the level of conformity of the organization to each obligation, and, as a consequence, to determine what improvements may be required.

3.1 How to be a sustainable champion

The interesting thing about all of these guides is that they are not just addressed to event planners but also to athletes and sports fans. They give an important framework of actions that can be taken by everyone and everywhere.

In this spirit, the IOC, with the support of the UN Environment Programme (UNEP), has draft a Guide for athletes and sports fans willing to live a “planet-friendlier and healthier life”.⁵⁶

This Guide, named “*How to be a Sustainable Champion*”, gives the athletes important advises on what they can do for being more sustainable. Since high-level athletes are considered of being role model for a lot of people, especially to youth, athletes have the moral duty of doing something. This duty can be fulfilled with a double way of action, in the first place, by assuming direct sustainable actions; in the second place, by speaking up. The Guide serves as a starting point for those willing to take the path to a more sustainable future.

As an athlete, it is required to have a well-balanced diet since food provides the needed nutrients and fuel for training and optimize the performances. By making informed food choices, athletes can feel benefits not just in terms of money but also in terms of health.

Scholars agree that the production of animal meat has a hidden and enormous impact on climate change, to make things clear, six beef burgers requires around 15.000 liters of water.⁵⁷ Deciding to cut down on meat, to make a good meal plan for the week (and only buy what it

⁵⁶ How to be a sustainable Champion: https://stillmed.olympics.com/media/Documents/Beyond-the-Games/Sustainability/Essentials/How-to-be-a-sustainable-champion-guide.pdf?_ga=2.144581493.1144528344.1658914986-1240183690.1653396533.

⁵⁷ <http://www.sciencedirect.com/science/article/pii/S0959378016302370?via%3Dihub#bib0330>.

is needed), to look for food options that do not have unnecessary plastic packaging are some of the many and easiest ways for making the diet more sustainable.

Whereas athletes have to compete in races and competitions that usually take place far from their hometown, travel is a relevant aspect in every athletes' life.

Important competitions, such as the Olympics, involve athletes (and their team, family, sponsors, fans, friends...) from all around the world, this can lead to both good and bad consequences, depending on which aspects we want to focus on. Sport-tourism can improve the creation of new jobs and support local business, yet, sometimes, sport-tourism come at a big cost to the environment.

Tourism is responsible for 8% of all global greenhouse gas emissions and air transportation has the biggest impact.⁵⁸ For instance, a flight from Tokyo to Sydney and back may produce over 2 tons of CO₂ per passenger.⁵⁹ Tourism can contribute to the over-use of water, notably in hot countries. As an athlete, what can be done, it is to become aware of all of these problems and to choose consciously the means of transport: trains and coaches represent a better and more sustainable way. If flying is the only transportation possible, consider offsetting the emissions from the flight, for example by looking for a provider whose projects are independently certified.

Another important thing to have in mind is that every time an athlete pass his hometown borders, he becomes a guest in someone else's home. Trying to buy from local business and opting for independent small hotel, rather than big chains, can increase both the economy of the place visited and the staying.

⁵⁸ <https://www.nature.com/articles/s41558-018-0141-x>.

⁵⁹ [https://tradingeconomics.com/world/co2-emissions-metric-tons-per-capita-wb-data.html#:~:text=CO2%20emissions%20\(metric%20tons%20per%20capita\)%20in%20World%20was%20reported,compiled%20from%20officially%20recognized%20sources](https://tradingeconomics.com/world/co2-emissions-metric-tons-per-capita-wb-data.html#:~:text=CO2%20emissions%20(metric%20tons%20per%20capita)%20in%20World%20was%20reported,compiled%20from%20officially%20recognized%20sources).

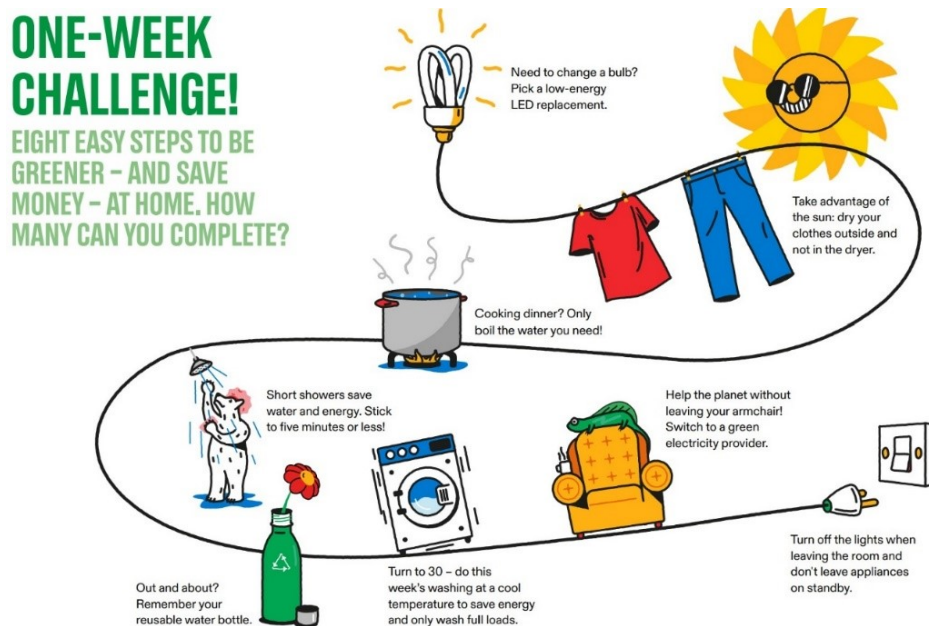


Image 1: Example of what we can do in our every-day life for making future more sustainable
 Source: IOC, *Hot to be a Sustainable Champion*, page 14

According with the IOC, each athlete should follow these five advises:

1. Stay on the ground, by avoiding flight;
2. Keep wildlife in the wild, by deciding to not buy or eat products made from protected species;
3. Keep the world beautiful, by using reusable bags and water bottles;
4. Show that you care, by asking tour operator what they are doing to protect the environment;
5. Think local, by preferring to buy and eat locally.⁶⁰

As we have seen, this Guide identifies key environmental challenges that need urgent action and offers practical tips on how living more sustainable lives.

In this sense, after the Olympic Games of Rio 2016, Hannah Mills, a British Olympic gold medalist and sailor, founded The Big Plastic Pledge,⁶¹ a global campaign with the aim to unify fans and athletes around the issue of plastic pollution.

As a sailor, H. Mills has experienced the devastating impacts of plastic pollution on the world's oceans, so she decided to call on everyone to reduce their use of single-use plastic in their

⁶⁰ How to be a Sustainable Champion, page 37.

⁶¹ <https://bigplasticpledge.com/>.

daily lives. “*I think, as athletes, we have such a platform to change people’s habits and demand more from our sporting events and organizers. [...] If we unite together, our voice can be so loud and powerful that we really can change people’s attitudes globally*”.⁶² Together with Hanna, different athletes have taken part of this initiative, notably, the British diving Leon Taylor and the British Paralympic table tennis player Martin Perry.

3.2 Carbon footprint methodology for the Olympic Games

In 2018, the IOC published the “*Carbon Footprint Methodology for the Olympic Games*”,⁶³ Guide with the aim of being a useful tool for developing a more sustainable carbon management in order to contain, minimize and measure the greenhouse gas emissions.

The Guide can be read together with the Paris Agreement⁶⁴ on climate change since they both have the aim of reduce the emission of greenhouse gas in the atmosphere. If the Paris Agreement represents the first international binding document focuses on climate change, the Guide elaborated by the IOC can be seen as the first guide that link together the reduction of greenhouse gas with sport by giving a complete and clear guidelines that helps NOCs and IFs developing their own sustainable strategy.

The IOC’s strategy sets out important requirements. Host cities and OCOGs (Organizing Committees for Olympic Games) need to minimize their carbon emissions and promote low carbon solutions for and through the Olympics.

According with the IOC Host City Contract, every time a city decides to host the Games, some requirements related to climate respect have to be followed, for instance, every host city has to integrate the potential consequences on climate change into the infrastructure planning.

Usually, *carbon footprinting*⁶⁵ applies only to organizations, services and products, however, the Olympic Game, as a singular and large-scale project that involves multiple private and public organizations, is subjected to permanent control.

⁶² <https://olympics.com/ioc/news/olympic-champion-hannah-mills-launches-bigplasticpledge>.

⁶³ Carbon Footprint Methodology for the Olympic Games, IOC, 2018: https://library.olympics.com/Default/doc/SYRACUSE/184686/carbon-footprint-methodology-for-the-olympic-games-international-olympic-committee?_lg=fr-FR.

⁶⁴ Paris Agreement, 2012: https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

⁶⁵ “The process of measuring the carbon footprint of a given system/project/organisation”, IOC, 2018, Carbon Footprint Methodology for the Olympic Games, page 9.

The OCOGs have started to measure the carbon footprint of both Olympic and Paralympic Games since the mid-2000s. During this time, what has been changed are the methodologies used, more importance has been given to quantitative methods and sophisticated devices able to offer a better and easier emission detection method.

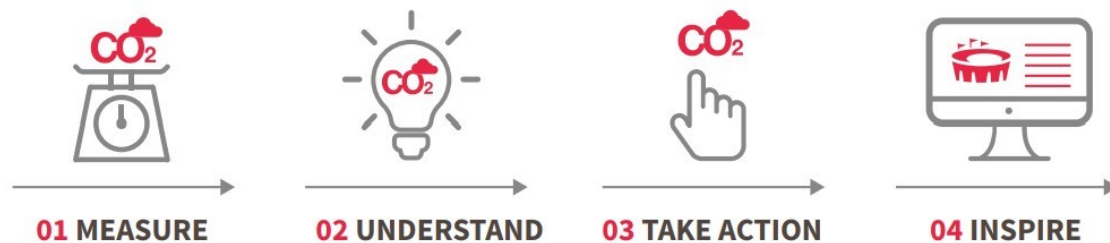


Image 2: Carbon footprint – the first of a four-step process
Source: IOC, Carbon Footprint Methodology for the Olympic Games, page 14

In each life-cycle stage, there is a potential reduction and/or improvement of performances, whether applied to services, products or organizations. The carbon footprinting is the first part of a four-step process, including a second step focused on a deep understanding of the carbon footprinting results, a third one that encourage to take actions that will reduce GHG emissions and a fourth, and last one, dedicated to inspiring others by communicating the efforts made.

As we have said above, carbon footprinting is not usually addressed to event, such as the Olympics Games, however, due to their importance, the IOC has elaborated its own carbon footprint methodology.

By doing so, some particular challenges were faced, especially due to the fact that the Games take place some years after the carbon footprint, that is way, for the Games, the nature of the footprint is a “*forward-looking estimation of anticipated impacts*”.⁶⁶

The majority of carbon emissions, aside from any Games-related construction, will occur during the development of the Games.

The IOC addresses the OCOG of being the responsible body for the carbon footprint detection and for the elaboration of the carbon management strategy for the Games. The methodology proposed in the Guide takes inspiration from three existing international standards: the GHG

⁶⁶ Carbon Footprint Methodology for the Olympic Games, IOC, 2018, page 16.

Protocol,⁶⁷ ISO 14064 and the European Commission's Organization Environmental Footprint (OEF).⁶⁸

4. IOC Sustainability Report 2021

Since the IOC has decided to follow the path towards a more sustainable future, it has elaborated a mechanism for becoming more *accountable*.

The IOC Sustainability Report are annual documents that refers to the disclosure of non-financial performance information to stakeholders and outsiders.

So far, all the elaborated Reports based on 18 sustainability objectives, namely:⁶⁹

1. Design and construction of Olympic House to be certifies according to nationally and internationally recognised sustainability standards;
2. Increase energy efficiency of the buildings;
3. Integrate sustainability in the sourcing of goods and services;
4. Achieve a measurable reduction in waste quantities;
5. Reduce the IOC's travel impact;
6. Further increase staff diversity;
7. Develop a wellness programme to promote healthy and active lifestyles at the IOC;
8. Achieve carbon neutrality by reducing direct and indirect greenhouse gas emissions;
9. Include sustainability in corporate events;
10. Ensure sustainability is addressed as a strategic topic with cities as early as the invitation phase stage;
11. Reinforce sustainability commitments in the Host City Contract so that bidding for and hosting an Olympic Games can act as a catalyst for sustainable development within the host city and region;
12. Strengthen support and monitoring of the implementation by OCOGs of sustainability-related bid commitments;

⁶⁷ The Greenhouse Gas Protocol,

https://ghgprotocol.org/sites/default/files/standards/ghg_project_accounting.pdf

⁶⁸ https://environment.ec.europa.eu/news/environmental-footprint-methods-2021-12-16_en#:~:text=The%20Environmental%20Footprint%20methods%20measure,methods%20agreed%20at%20international%20level.

⁶⁹ IOC Sustainability Report, Sharing Progresso on our 2020 objectives, page 9

https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/IOC%20Sustainability%20Report_Final%20Rev1.pdf.

13. Facilities exchanges between Olympic Games stakeholders and build strategic partnership with relevant expert organisations to develop innovative solutions for planning and staging of the Olympic Games;
14. Provide mechanisms to ensure exchange of information and best practice between Olympic Movement Stakeholders;
15. Facilitate access to relevant expert organisations to develop guidelines and innovative solutions;
16. Leverage Olympic Solidarity to assist NOCs in implementing sustainability initiatives;
17. Set up an ambassador programme including athletes in order to raise awareness on sustainability in sport;
18. Profile the role of the Olympic Movement in sustainability through aggregation of information and collective reporting.

The first Report⁷⁰ was published in 2017 and contained the main goals to achieve in 2017-2020. With this first Report, the candidature for the 2024 Olympic and Paralympic Games was deeply influenced, that is way the city that was selected, Paris, has elaborated a clear plan on how the organisation of the Games have to respect and guarantee sustainability standards.

Since not all the goals were effectively achieved before 2020, on the 6th December 2021, the IOC published the Sustainability Report 2021,⁷¹ which defines new priorities for the period 2021-2024.

This latest Guide takes into account not just the precedent efforts, but also future prospective by having in mind the recent stunning events, such as the COVID-19 pandemic and its impacts on the Olympic Movement.

The HSH Prince Albert II of Monaco stated that: *“the COVID-19 pandemic has illustrated the need for people to live, work and play in a more sustainable manner. The Olympic Games and sport in general, can play a powerful role in defining how we recover from the crisis. It is our collective responsibility to leverage this power and continue to adapt. To address global issues*

⁷⁰ <https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/Documents/IOC-Annual-Report/IOC-annual-report-2017.pdf>.

⁷¹ <https://stillmed.olympics.com/media/Documents/News/2021/12/IOC-Sustainability-Report-2021.pdf>.

*such as climate change, biodiversity loss and human rights, it is imperative that we remain open to change and innovation”.*⁷²

Before COVID-19, there was a common idea that sustainability was not on people’s priority list, however, with the pandemic, the fear of *big uncontrolled threats* that can materialised quickly became commonplace.

In 2021, out of the 18 sustainability goals of the IOC that have been previously introduced, 15 have been fully achieved and three only partially (objectives #3, #9 and #17):

1. Goal number one is now fully achieved thanks to the construction, in 2019, of the Olympic House in Lausanne, Switzerland. The new headquarters, with its three certifications⁷³, represents the main sustainable building in the entire world. The project was drafted by an international studio of Danish architecture⁷⁴ that won the candidature in 2014. The building was constructed by having in mind five fundamental concepts: transparency, flexibility, movement, sustainability and partnership. The Olympic House synthesises the sustainable standards thanks to a holistic approach towards sustainability; it embeds strict energy efficiency criteria and optimises the guest wellness. Solar panels and heat pumps, which use water from the nearby lake, provide renewable energy by which the consumption of energy has decreased around 35% less of the precedent years.



*Image 3: Olympic House, Lausanne, Switzerland
Source: IOC Website*

⁷² IOC Sustainability Report 2021, page 3.

⁷³ The Leed Platinum Certification, released by the Green Building Council; the Swiss Sustainable Construction Standard Platinum and the Minergie-P label.

⁷⁴ 3XN Studio, official website: <https://3xn.com/>.

2. The goal number two has been achieved thanks to the energy efficiency plans adopted across three areas: the Olympic House, the Olympic Museum and the Olympic Broadcasting services/Olympic Channel Services facilities. Despite the goal has already been achieved, the IOC needs to improve it.
3. Goal number three represents one of goals that have not yet been achieved. Progress have been slower than anticipated, and more intensive efforts in relations with the Worldwide Olympic Partners are required.
4. Objective number four has been achieved thanks to a progress elimination of single-use plastic across the facilities.
5. During the period 2017-2019, internal measures to reduce travel footprint have been introduced. For what concerns business travel, flights have been forbidden for trips shorter than four hours. In June 2020, after the COVID-19 pandemic, remote working has been introduced and nowadays represents one of the work modalities most used.
6. Regarding the increase of staff diversity, during the past years, lot of progress have been made. If in 2017 the female IOC members were around the 29%, in 2020 the number has grown around 38%.⁷⁵ The IOC has already expressed its desire in reduce gender-based bias and gender pay gap.
7. From 2017, in order to achieve objective number seven, the IOC has provided numerous initiatives to encourage healthy and active lifestyles within its staff.
8. All the measurements taken contribute to reduce the IOC carbon emissions.

| ANNUAL CARBON FOOTPRINT | 2016 | 2017 | 2018 | 2019 | 2020 |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|
| Tonnes CO ₂ e/year | 39,070 | 45,540 | 60,630 | 30,050 | 9,820* |

*Our provisional carbon footprint for 2020 is 9,820 tCO₂e, reflecting a drastic cut in CO₂ emissions, primarily due to the postponement of the Olympic Games Tokyo 2020 to 2021. This figure will be recalculated and republished in 2022, in order to include CO₂ travel emissions which occurred in 2021 and were directly linked to the Tokyo Games.

Table 2: Annual Carbon Footprint from 2016 to 2020
Source: IOC Sustainability Report 2021, page 13

The goal to achieve carbon neutrality was fulfilled during 2017-2021 via projects implemented as part of the IOC-Dow global carbon mitigation programme.⁷⁶

9. Objective number nine has been only partially achieved. Sustainability measures have been introduced since 2018 into corporate events, however the integrated management systems approach has not been sufficiently developed.

⁷⁵ For more details, IOC Sustainability Strategy Report 2021, page 12.

⁷⁶ See Dow Carbon Report, 2020.

10. Sustainability has become a prominent aspect of selecting future Olympic Games hosts. This approach was used during the selection for the candidate cities for the Olympic Games 2024, which saw Paris and LA elected to host the Olympic Games 2024 and 2028 respectively.
11. All the documents relating to the selection of future hosts contain references to sustainability. Revisions to the Host Contract Principles were made in late 2020, in order to ensure alignment with new commitments and targets relating to climate-positive Games.
12. During latest years, the collaborative working relationship between the IOC Sustainability team and counterparts within OCOGs has evolved. In particular, several documents to help OCOGs in their work were released, notably: the *Carbon Footprint Methodology for the Olympic Games* (Dec 2018), the *Olympic Games Guide on Sustainable Sourcing* (April 2019) and the *Olympic Games: A Springboard for Young Professionals* (March 2020).
13. Progress have been made for develop intense and deep relations within all the IOC' stakeholders. Some of the initiatives made are broad agreements to work together for a sustainable development. For instance, in 2019, the IOC and the OECD⁷⁷ signed a Memorandum of Understanding⁷⁸ aimed to promote ethics, good governance and integrity, as well as peace. The OCED will support the IOC in protecting integrity of sport by helping the organisation of the Olympic Games Paris 2024.
14. The IOC has seen considerable progress in providing mechanisms to ensure exchange of information within Olympic Movement stakeholders, in particular by realising the Sustainability Essentials.
15. The IOC has built strong new partnerships to provide a stronger base of expertise willing to support and guide the Olympic Movement. During the COVID-19 pandemic, the IOC worked on a school project named Earth School⁷⁹ for providing educational materials for schools children on topics like plastic pollution reduction and biodiversity.
16. During 2017-2020, the IOC has been collaborating with Olympic Solidarity to help NOCs with technical assistance through the European NOCs Sustainability Working Group.

⁷⁷ Organization for Economic Co-operation and Development.

⁷⁸ IOC joins forces with OECD under new agreement - Olympic News (olympics.com).

⁷⁹ Earth School launched to keep students connected to nature | .

17. The goal number 17 is the third of the three objectives that still need to be achieved. The number of athletes willingly to be Sustainability Ambassador has increased since 2019, but the number is not enough. One of the few examples is Hanna Mills⁸⁰ with her Big Plastic Pledge initiative that has united more than 3.000 athletes so far. The IOC is now working together with a group of athletes, Ifs and Worldwide Olympic Partners for finding a way to integrate athletes' recommendations into the Olympic Games.
18. The last objective has been fully achieved during the past years.

Since the publication of the IOC Sustainability Report 2021, the IOC Sustainability team has been involved in developing new initiatives.

One of these initiatives is the IOC Young Leaders Programme, originally launched in 2016 with the support of Worldwide Olympic Partner Panasonic.

The programme was born with the aim to empower young people to leverage the power of sport for making a positive difference in their own community.

The second edition of the IOC Young Leaders Programme⁸¹ was launched in October 2021 and it has seen 25 future leaders imagine and design their own sustainable sport-based social business during a four-year period (2021-2024). Each project promotes Olympic principles such as respect, peace and gender equality, while addressing a specific local problem.

Another initiative is the creation of the Olympic Forest⁸² as part of the Great Green Wall project in Africa, an initiative to combat desertification in Africa's Sahel region.

The IOC selected Tree Aid, a non-profit organisation, as partner that would implement the Olympic Forest project on its behalf. Tree Aid, after more than 30 years' experience working with people in the drylands of Africa, has developed, together with the IOC, a 2021-2024 work-plan, budget and reporting timeframe. The project is to plant more than 350,000 native trees in Senegal and Mali over the period of four years. The trees will be planted across 2,120 hectares in approximately 45 villages in each country.⁸³

The main aim of all of these initiatives is to become climate positive by 2024.

⁸⁰ More information at Chapter 3.1 of this work.

⁸¹IOC Young Leaders Programme, Young-Leaders.pdf (olympics.com).

⁸² Olympic Forest, <https://olympics.com/ioc/news/ioc-reveals-details-of-its-olympic-forest-project>.

⁸³ IOC Sustainability Report 2021, page 22.

The IOC will reach this goal by removing more CO₂ from the atmosphere than the organisation emits. The Olympic Forest is expected to remove 200,000 tonnes of CO₂, which exceeds the IOC's projected emissions over the 2021-2024 period.

4.1 IOC sustainability objectives for 2021-2024

Sustainability was one of the three pillars of the Olympic Agenda 2020.

The relationship between the overall IOC direction and the sustainability programme has become even closer through the development of the Olympic Agenda 2020+5, an action plan with 15 recommendations for 2025.

Considering the COVID-19 pandemic, the 15 recommendations have been pointed out as likely to be crucial in the post-coronavirus world. Its purpose is to guarantee further digitalisation, greater solidarity, increased sustainability and a reinforced based on the role of sport in our society.

Three of these goals specifically relate to the issue of sustainability: #2 Foster sustainable Olympic Games; #10 Strengthen the role of sport as an important enabler for UN Sustainable Development Goals and #13 Continue to lead by example in corporate citizenship.

The new 17 2021-2024 sustainability goals derived both from the new focus of the Olympic Agenda 2020+5 and the experience of the last four years and they have been chosen to meet five criteria:

1. Contribute to Olympic Agenda 2020+5;
2. Reflect the IOC's commitment to be a climate positive organisation by 2024;
3. Reflect the result of a comprehensive stakeholder consultation process;
4. Address the global context;
5. Address the contextual environment in which it operates.⁸⁴

By analysing together the 18 sustainability goals presented in the IOC Sustainability Report 2021 and the new 17 sustainability objectives to reach by 2025, we can analyse the path followed by the IOC.

⁸⁴ IOC Sustainability Report 2021, page 25.

The new 2021-2024 sustainability objectives are more focused on reducing the CO2 emissions and on developing a culture of sustainability among its stakeholders.

The IOC's gaze is now addressed to develop and increase its collaboration with other international organisations with which it shares the same idea about future. Most of the new objectives are indeed related with trying to enhance the relations with old partners and to establish different and new alliances.

For instance, goal #12 has the aim to help IFs and NOCs joining the UN Sports for Climate Action Framework.⁸⁵ By July 2021, a number of 8 NOCs and 21 Ifs signed up to the UN Sports for Climate Action Framework.

⁸⁵ IOC Sustainability Report 2021, page 29. Goal #12: *“work with IFs whose sports are on the Olympic programme and NOCs for them to join the UN Sports for Climate Action Framework”*.

1. Hosting the Olympic Games

According with the Olympic Charter, “*the honor and responsibility of hosting the Olympic Games are entrusted by the IOC, in principle, to a city, which is elected as the host of the Olympic Games*”.⁸⁶

The selection procedure for hosting the Olympic Game is not easy.

The IOC can evaluate only one city’s application for each country, however, should there be different potential applicants in the same country for the same Olympics.

Therefore, it’s the duty of every NOC to choose only one claimant that will send its application to the IOC. The application document consists in a questionnaire provided by the IOC, which, after having obtained all the answers from the different cities, drafts a list of the cities with the best score, which will be admitted to the second phase of the selection. Only the cities that pass this first phase can be considered and called *Candidate Cities*.

During the second phase, those cities accepted as “Candidate Cities” by the IOC Executive Board will be required to submit a Candidature File to the IOC. During the annual assembly of the IOC, that is held in a non-applicant city, the Evaluation Commission examine the cities’ candidatures and draft an evaluation report, based on which the IOC Executive Board will prepare the list of Candidate Cities to be proposed to the IOC Session for election.

All cities wishing to host the Olympic Games are required to comply with the IOC Code of Ethics, the Olympic Charter and all other rules established by the IOC. “*It is the obligation of the Host City to also host the Paralympic Games. The Paralympic Games will be held after the Olympic Games, with a specified period between the two events to be agreed between the IOC and the IPC*”.⁸⁷

Thanks to its ability to collect large amounts of data in a standardized way, the questionnaire helps the IOC during the selection procedure.

⁸⁶ Olympic Charter, page 72, Rule 32, Celebration of the Olympic Games.

⁸⁷ Olympic Charter, page 77, Bye-law to Rule 37, Olympic Games Coordination Commission.

From a different point of view, we can analyze the questionnaire not from the given *answers* but from the *questions* made. Since just certain questions are posed, it's possible to deduct that the chosen ones focus on the topics of most interest for the IOC; in other words, the document explicates what is truly important to the IOC for making a choice.

The latest questionnaire was published in January 2021⁸⁸ and it will help determine the Host City for the Games of the XXXVI Olympiad 2036.

The candidates will answer different questions that can be gathered into six different clusters, notably:

1. Vision, Games Concept and Legacy;
2. Games Experience;
3. Paralympic Games;
4. Sustainability;
5. Governance;
6. Economics of the Games.

According with the importance given at the issue of sustainability by the IOC in its recent works, all the questions presented in the questionnaire are related with this topic.

The IOC will work nearly with the City Host developing an Olympics that is “*sustainable and cost-effective, as well as aligned with the sporting, economic, social and environmental long-term planning needs*”⁸⁹.

In this search of sustainability, it is crucial that Preferred Hosts and their governments take coherent actions capable to maximize the use of pre-existing infrastructures; each candidate has to explain its own hospitality strategies having in mind the idea of long-term city/regional development.

Each claimant must provide an accurate capital investment budget, specifying the origin of the funding⁹⁰ (public or private). For realizing sustainable Olympics, it's essential to have a good governance capable of guaranteeing the development and respect of human rights at every level

⁸⁸ https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/Games/Future-Olympic-Hosts/Future-Host-Questionnaire-Olympic-Games.pdf?_ga=2.187703848.1806718809.1646303217-546605108.1640074831.

⁸⁹ Questionnaire January 2021, page 3, Vision, Games Concept and Legacy.

⁹⁰ Questionnaire January 2021, page 9, table 11, it represents an example of how the cities have to specify the origin of the funding.

of the organization of the Games; the applicants need to adapt the event management with the UN Guiding Principles on Business and Human Rights⁹¹.

For better understanding the path taken by the IOC, it's crucial to analyze, with a comparative method, the questionnaires of different Games' editions. For quantitative and qualitative reasons we will examine only two questionnaires published 12 years apart, in particular: the *Candidature Acceptance Procedure for the Games of the XXX Olympiad 2012*⁹² and the *Candidature Acceptance Procedure for the Games of the XXXIII Olympiad 2024*⁹³.

The *Candidature Acceptance Procedure for the Games of the XXX Olympiad 2012* was published in 2003 and it has seen London as winner. The questionnaire opens with the IOC Code of Ethics as a reminder, for all the applicants, of the IOC's values.

In 2003, the IOC was already aware of the deep and wide impact of the Games and decided to inaugurate a new initiative (the Olympic Games Global Impact (OGGI)⁹⁴ project) in order to control and improve Games' accountability. The main objectives of the Project are:

1. To improve understanding of the overall Games' impact;
2. To provide Organizing Committees with a consistent methodology to capture the Games' effects;
3. To help Applicant/Candidate cities and future organizers identify the Games' potential benefits and burdens.⁹⁵

OGGI⁹⁶, in accordance with the definition of sustainability, represents a multidisciplinary project that takes into account social, economic and environmental impacts of hosting Olympic and Paralympic Games.

Each OGGI project covers a period of 12 years during which it's required to publish a series of four reports. The first report is called *Baseline Report* and it provides a general framework of the Game useful for the following report. This report is followed by a *Pre-Games Report* that

⁹¹ https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf.

⁹² <https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/Documents/Host-City-Elections/XXX-Olympiad-2012/Candidature-Acceptance-Procedure-for-the-Games-of-the-XXX-Olympiad-2012.pdf>.

⁹³ https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/Documents/Host-City-Elections/XXXIII-Olympiad-2024/Candidature-Questionnaire-for-the-XXXIII-Olympiad-2024.pdf?_ga=2.16217139.423277909.1661178038-1240183690.1653396533.

⁹⁴ Now only OGI: Olympic Games Impact.

⁹⁵ IOC, 2003 *Candidature Acceptance Procedure for the Games of the XXX Olympiad 2012*, pages 21-22, OGGI.

⁹⁶ Now just OGI, Olympic Games Impact Study.

takes into account updated contextual data. Next, a *Games-Time Report* to analyze Olympic-event data and finally, a *Post-Games Report* to provide a final conclusion on the Games.

By analyzing the themes presented in the Candidature of the XXX Olympiad 2012 we can notice how, a part from the OGGI project, a clearer reference to sustainability is not included. The main questions are indeed focused on the following aspects: motivation; political support; finance; venues; accommodation and transport infrastructure.

The *Candidature Acceptance Procedure for the Games of the XXXIII Olympiad 2024* was published in 2015 and it has seen Paris as winner. A part from the length of the document, first thing to notice is the clearer link with the concept of sustainability since from the beginning of the document it is possible to find expression as “long-term development” or “positive and sustainable host city”.⁹⁷

In particular, the Section 1.2, *Legacy and Long-Term Plan Integration and Alignment*, of the questionnaire, requires the applicant-cities to demonstrate that there is alignment of the Games with long-term plans on the basis of environmental and sustainable development.

Unlike the Candidature for the Games of the XXX Olympiad 2012, this questionnaire call for providing sustainable infrastructures capable of respecting natural and cultural environments. The Applicants have to provide information on the sourcing of the national power grid and to give detailed data on the ambient air quality and water conditions in the city.

As we can deduct from the title, the paragraph 3.6, *Sustainability*, is entirely dedicated at this matter. Applicants have to explain their idea of sustainability in relation with the Olympic Games and they have to clarify the measures envisaged to achieve the sustainability’s goals.

By reading the two questionnaires together we can notice that the most recent one guarantees more accountability of the Games since the applicant-cities have to define almost every aspect of the organization.

They are required to explain the deeper and smaller details, such as the number of runways of the main international airport and how every single money will be used during the planning and the conduct of the Games. Moreover, applicant cities have to specify the origin of founding.

⁹⁷ IOC, 2015, *Candidature Acceptance Procedure* for the Games of the XXXIII Olympiad 2024, page 4.

There is no doubt that the questionnaire that has seen Paris as winner still represents the fruit of its time, where public opinion on sustainable development was not as diffused as now. However, doubtless is that the planning of the XXXIII Olympiad 2024 can not fail to take into account recent IOC's works such as the Sustainability Essentials.

A clear example of what has just been said is showed in *Table 3*, which presents the evolution of the sports programme of the Games of the Olympiad since 1896.

Considering the number of the athletes, the Games of 2024 will have an equal number of male and female athletes, for a total of 10,500 athletes. The tendency is therefore to increase not just the number of disciplines but also to guarantee more gender-equality.

| Editions | Women | Men | Total of athletes | Number of sports | Number of events |
|----------|--------|--------|-------------------|------------------|------------------|
| 1896 | | 241 | 241 | 9 | 43 |
| 1900 | 22 | 975 | 997 | 19 | 95 |
| 1904 | 6 | 645 | 651 | 16 | 95 |
| 1908 | 37 | 1,971 | 2,008 | 22 | 110 |
| 1912 | 48 | 2,359 | 2,407 | 14 | 102 |
| 1920 | 65 | 2,561 | 2,626 | 22 | 156 |
| 1924 | 135 | 2,954 | 3,089 | 17 | 126 |
| 1928 | 277 | 2,606 | 2,883 | 14 | 109 |
| 1932 | 126 | 1,206 | 1,332 | 14 | 117 |
| 1936 | 331 | 3,632 | 3,963 | 19 | 129 |
| 1948 | 390 | 3,714 | 4,104 | 17 | 136 |
| 1952 | 519 | 4,436 | 4,955 | 17 | 149 |
| 1956 | 376 | 2,938 | 3,314 | 17 | 151 |
| 1960 | 611 | 4,727 | 5,338 | 17 | 150 |
| 1964 | 678 | 4,473 | 5,151 | 19 | 163 |
| 1968 | 781 | 4,735 | 5,516 | 18 | 172 |
| 1972 | 1,059 | 6,075 | 7,134 | 21 | 195 |
| 1976 | 1,260 | 4,824 | 6,084 | 21 | 198 |
| 1980 | 1,115 | 4,064 | 5,179 | 21 | 203 |
| 1984 | 1,566 | 5,263 | 6,829 | 21 | 221 |
| 1988 | 2,194 | 6,197 | 8,391 | 23 | 237 |
| 1992 | 2,704 | 6,652 | 9,356 | 25 | 257 |
| 1996 | 3,512 | 6,806 | 10,318 | 26 | 271 |
| 2000 | 4,069 | 6,582 | 10,651 | 28 | 300 |
| 2004 | 4,329 | 6,296 | 10,625 | 28 | 301 |
| 2008 | 4,637 | 6,305 | 10,942 | 28 | 302 |
| 2012 | 4,676 | 5,892 | 10,568 | 26 | 302 |
| 2016 | 5059 | 6179 | 11,238 | 28 | 306 |
| 2020 | ~5,407 | ~5,685 | ~11,092 | 33 | 339 |
| 2024 | 5250 | 5250 | 10,500 | 32 | 329 |

Table 3: Evolution of the sports programme of the Games of the Olympiad since 1896
Source: IOC, Factsheet: The programme of the Games of the Olympiad, page4

2. Positive and negative impacts of hosting the Olympic Games

Being chosen as City-Host of the Olympic Games is a great honor for both the city and the country in which the Games will take place.

The relevance of Mega-Sport Events such as the Olympics can shape the view that countries, cultures and people have of each other. The Olympic Games, by their multidimensional nature, synthesize the concept of a global event and can therefore represent an attractive field of investigation able to shed new light on the debate over sustainable development of postmodern cities.

We can't judge the consequences of hosting the Olympic Games only by having in mind the two categories of positive and negative effects because there is always a mix of both in all cases. However using this paradigm helps making the analysis easier.

Doubtless, one of the benefit deriving by hosting the Olympics is the prestige to define the host city "on the map".

After the Olympic Games of Sydney 2000, the New South Wales Government stated that "*The Games served as a magnet for domestic and international tourism and rapidly accelerated the process of elevating Australia's international profile and brand in a way that would not otherwise have been possible*"⁹⁸.

Since the planning of the Games depends on the available budget, sponsorships and other types of investments are required. By a macroeconomic point of view, hosting the Games can be considered as an attempt to establish new trade relationships and to attract brand-new investments.

The Winter Olympic Games XIX of Salt Lake City 2002 made a profit of US\$ 100 million given at the Utah Athletic Foundation, the organization responsible for running several of the venues used during (and after) the Olympic Games.⁹⁹

As specified by the Candidature Acceptance Procedure for the Games of the XXXIII Olympiad 2024, "*it is important that Candidate Cities and their government/city partners have a coherent venues strategy which optimizes use of existing venues and leverages the Olympic Games to enhance relevant and sustainable sport infrastructure*"¹⁰⁰.

⁹⁸ PRICEWATERHOUSE COOPER (at the request of the New South Wales Department of State and Regional Development (Australia), Business and Economic Benefits of the Sydney 2000 Games: A Collation of Evidence, Sydney, 2002, <http://www.business.nsw.gov.au/olympicsreport>.

⁹⁹ SALT LAKE TRIBUNE, *A successful Games*, October 1st, Salt Lake City, 2002.

¹⁰⁰ IOC, 2015, Candidature Acceptance Procedure for the Games of the XXXIII Olympiad 2024, page 81.

In some cases, the Games have allowed the development of degraded areas. For instance, the Games of the XXV Olympiad Barcelona 1992 have left a new seafront area, a stretch of 5.2 km of coastal landscape that was redeveloped and now it is used by residences and tourists for spending their free time.

Considering from a social point of view, the Games offer new opportunities for improving organization and planning skills among the City-Host's population.

As said by T. Roper on the occasion of the Olympic Games of Sidney 2000, "*participation in state of the art facility and service design enhanced innovation in private sector firms. Also, more than 100,000 individuals, including 50,000 volunteers, received technical and further education training*"¹⁰¹. Moreover, the Games may spread sport's practice across the host population as well as promote Olympic values such as respect, *fair-play*, tolerance and others.

Politically too, the Olympic Games contribute to give a positive international view of the Host, as happened in South Korea where, thanks to the Olympic Games of Seoul 1998, the country was launched on the international panorama and it was able to improve its role among the "Asian tigers".¹⁰²

The Games create an international community based on shared fundamental principles and rights among the countries.

Usually these principles have already been recognized by International Treaties, however not all the countries have signed these documents and in this sense we can affirm that the Games can improve the recognition and the ratification of these treaties among typically hostile countries. That is the case of the Russian Federation, which in 2014 ratified the UN Convention on the Rights of Person with Disabilities in occasion of the Winter Paralympic Games of Sochi 2014.

Under this heading, it is possible to discuss some of the negative impacts that Olympic Games may have on the host city and its population.

¹⁰¹ ROPER, T., The Sydney Olympics and their Impact on Development, Cities' Experiences: the Impact of Major Events on the Development of Large Cities, World Association of Major Metropolises, Metropolis 2002, pp. 95-98 (<http://www.metropolis.org>).

¹⁰² METROPOLIS, The Impact of Major Events on the Development of Large Cities.

First thing to consider is what has been called the phenomena of “*white elephants*”, namely the over-sized of costly and half-empty venues, which were created according with the Olympic-size.

White elephants are the consequence of the governments’ narcissism that tend to want to show their organizational skills and political-economic power while neglecting a rational vision of long-term planning.

For instance, the Rio’s Olympic Aquatic Stadium was projected as a temporary venue, which could be disassembled so it could turn into a new community swimming centers in Madureia Park and the Campo Grande area. Unfortunately, the plan was always clouded by the long-term timeframe of the project within the Brazil’s fragile political environment.¹⁰³

Another important aspect to have in mind regards the economic interest around the Games.

The Olympics can be used by a new kind of urban entrepreneurs who give less importance to public welfare and public services. Entrepreneurial conception of the Games may create a lack of public consultation when planning.

On her study on the consequences of the Olympic Games of Sydney 2000, K. A. Owen identified some aspects of this urban entrepreneurialism. This included “*increased centralization of planning powers, increased privatization of government operations, the relaxation of normal planning requirements, reduced or tokenistic community consultation, subversion of democratic principles, and reduced public accountability*”¹⁰⁴.

This lack of democratic procedure during the planning phase can led to the creation and development of *white elephants* since the needs of population are not taking into account.

Sustainability principles privilege a more methodic approach instead of quick decisions taken in crucial moments. Great care must be used for counter-balance the tendency, typical of post-modern societies, for social and spatial polarization that, sometimes, lead to create ghettos.

¹⁰³ <https://www.news.com.au/sport/sports-life/rios-olympic-aquatic-centre-left-in-ruins-after-grand-promises/news-story/f0d7a5aedfd314c41ae42f66b98d5ca3>.

¹⁰⁴ OWEN K. A., *The Local Impacts of the Sydney 2000 Olympic Games: Processes and Politics of Venue Preparation*, Sydney, Centre for Olympic Studies, University of New South Wales, 2001.

New venues need to guarantee the sustainable development of local community and have to be integrated in a wider and long-term vision of urban development.

The goal is to leave a permanent heritage of the Olympics in the Host-City. Stadiums represent the best example of this attempt, however, experience shows that in more than one occasion the Olympic venues have been oversized and allowed the existence of the so-called *white elephants*. Only when the host communities' permanent needs are taken into account can the investment for a newly built venue be justified.¹⁰⁵

3. Deep in the cases

Despite the promises made by the Organization Committee for the Olympic Games of Rio 2016, the Games have highlighted the gap between environmental words and deeds.

Notably, Rio's Olympic bid declared to finally clean up Guanabara Bay, the bay dedicated to hosting the sailing competition, and Lagoa Rodrigo de Freitas, the home to canoeing, kayaking and rowing competitions. Even with the draft of two sanitation programs; sooner has proved that these projects were too ambitious. In April 2015 almost 40 tonnes of dead fish mysteriously appeared at Lagoa Rodrigo de Freitas, after two months, Guanabara Bay had the same destiny.

In order to reduce risks for athletes, the Organization Committee, together with the World Sailing Federation, was forced to transfer the competitions to Bouzios, 150 kilometers from Rio.¹⁰⁶

Rio 2016 also broke its promises related to tree planting. To offset carbon emissions, Rio 2016 pledged to plant over 24 million of trees while Carlos Minc, the State of Rio de Janeiro's Secretary for the Environment, escalated the promise up to 34 million trees. By spring 2015, only 5.5 million trees had been planted.¹⁰⁷

The Olympic golf course also raised environmental and social concerns, specialty due to the love of the Rio's Government for attract and enable private investment. The building of Rio's Olympic Golf Course represents an example of such private-public partnership. Since Rio has

¹⁰⁵ FURRER P., Sustainable Olympic Games: a dream or a reality?. Draft copy. The final one has been published, in Italian, on the Bollettino della Società Geografica Italiana, Serie XII, Volume VII, 4, 2002, page 11.

¹⁰⁶ Curi, Martin, Jorge Knijnik, and Gilmar Mascarenhas, 2011, "The Pan American Games in Rio de Janeiro 2007: Consequences of a Sport Mega-Event in a BRIC Country," International Review for the Sociology of Sport.

¹⁰⁷ Konchinski, Vinicius, 2016, "Rio Rescinde Contrato e Abandona Ultimo Legado Ambiental da Olimpíada," <http://olimpiadas.uol.com.br/noticias/2016/03/17/rio-rescinde-contrato-eabandona-ultimo-legado-ambiental-da-olimpiada.htm>.

already two golf course,¹⁰⁸ the construction of a third one was optional, however, Rio's Olympic Delivery Authority claimed the impossibility to use these two course for the Olympics (one was lacked of space and the other one did not have necessary irrigation and drainage).

The new golf course was built in Barra da Tijuca, a western suburb. Before the construction, Rio Mayor Eduardo Paes signed a real-estate deal, which made possible private developers to cover the price of the golf course's construction in exchange for the right to build 140 luxury apartments around the course and garner the profit from their sale.¹⁰⁹

Morevor, during the construction of the course, the autochthon flora and fauna was decimated.

¹⁰⁸ Gavea Golf Club and Itanhangá Golf Club.

¹⁰⁹ Hodges, Elena, 2014, "The Social and Environmental Costs of Rio's Olympic Golf Course," Rio On Watch, 22 August.

1. Brief history on sustainable Olympic Games

It's all started with the Winter Olympic Games XVII of Lillehammer 1994, considered as the first “ecological” Games of history of the Olympics. From that moment, sustainable development has become an aspect of main relevance for planning the Olympic Games.

A decisive turning point happened with the Olympic Games XXVII of Sydney 2000 when the Sydney Games Bid Committee published the *Environmental Guidelines for the Summer Olympic Games* even before winning the right to hosting the Games.

Various eco-friendly technologies were used during the operation stages and planning, notably the use of solar energy at the Olympic Village and low-emission public transport.

The transformation of the Homebush Bay area from a polluted, industrial wasteland to a revitalized complex of venues, wetlands and parklands by the NSW State Government is one of the most notable environmental achievements, and legacies, of the Sydney 2000 Olympic Games.¹¹⁰

So far, are the Olympic Games XXX of London 2012 that have won the gold medal in the Environmental and Sustainability category of the 6th International Sports Event Management awards.

One of the most visible achievement was (and still is) the Queen Elizabeth Olympic Park, a sporting complex in East London. Before the Games, the site was a mixture of brownfield and greenfield land that were later reclaimed to create a suitable place to host the Games. With a budget of £292 million and an area of parkland of 102 hectares, the Park has created the best place for playing, living and working while respecting the environment.

Sustainability was at the core of London's successful bid and the Park, with its venues, respects these promises.

¹¹⁰ BALDERSTONE, S., 2000 PLUS, Environmental Actions and Legacies of the Sydney 2000 Olympic Games, unpublished.

The Velodrome was built with 100% sustainable source, while the Copper Box, a multisport venue, was covered with recycled copper and it is equipped with a system of rainwater's collection that allow to limit water waste.

However, sustainability goes beyond the environment and the Park also represents a place of social equality, economic growth and prosperity. The environmental themes behind the creation of the park were: energy conservation and carbon reduction; waste management; water management and conservation; biodiversity; facilitating sustainable lifestyles; transport and connectivity and materials selection.¹¹¹

Each year the London Legacy Development Corporation (LLDC) reports on the development made towards reaching sustainable goals, which are based on the Legacy Community Scheme commitments and the Sustainability Guide to Queen Elizabeth Olympic Park 2030. The first LLDC Environmental Sustainability reports was published in 2015 and the most recent one in 2021.

London 2012 was also the first Games to control and measure its carbon footprint and to achieve a *zero waste* games. Notably, games planners saved the equivalent of 400,000 tonnes of carbon dioxide, while 100% of Games operations waste was diverted from landfill.¹¹²

2. Paris 2024

It is clear that sustainable Mega-Sport Events is now become a challenge and a priority.

The Games of the XXXIII Olympiad of Paris 2024 intend to turn this challenge into a commitment and to become the most sustainable Games of all time.

As stated by Tony Estanguet, President of the Committee in charge of planning the Olympic Games of Paris 2024, “*with the Games, we put environmental ambition at the heart of our project. We want to rethink the way the Games are organised through a 360-degree approach throughout the entire cycle of preparation and organisation*”¹¹³.

¹¹¹ London Legacy Development Corporation, Your Sustainability Guide to Queen Elizabeth Olympic Park 2030, pages 4-5, https://www.queenelizabetholympicpark.co.uk/-/media/qeop/files/public/misc-documents/lldc_your_sustainability_guide_to_the_queen_elizabeth_olympic_park2030.ashx?la=en.

¹¹² <https://olympics.com/ioc/news/london-2012-s-sustainability-legacy-lives-on>.

¹¹³ Translated from the French version of the interview conducted by Tristan Lebleu and published on the SolarImpuse Foundation on the 7 June 2019, https://solarimpulse.com/actualites/recherche?_method=POST&news-year%5B0%5D=2019&news-category=0&news-author=4&page=3.

The Games will take place in Seine Saint-Denis, suburb situated in the northern part of Paris. The choice of this place as a venue for the Olympic Games already offers a clear sign of how the organizing committee decided to put sustainability at the centre of his action, trying, with the Olympic Games, to give a new light to a neighbourhood always been considered as one of the most dangerous in the metropolis.

In the application questionnaire prepared by the Bidding Committee, the prospectus of the venues dedicated to host sports competitions was presented.

Unlike previous editions of the Games, Paris 2024 will exploit 95% of buildings already existing (finished or requiring work). The 5% represents the construction of the Aquatic Center right in the area of Seine Saint-Denis. This choice reflects the deep sociological and urban analysis that is accompanying the organization of the games. In the Seine-Saint-Denis area, there are only 35 swimming facilities including 61 swimming pools for a population of 1.6 million, i.e. 0.53 swimming pools per 100,000 people compared with the national average of 0.94, while Paris has just 0.36 swimming pools per 100,000 people. That means that only one in two children aged 11 in Seine-Saint-Denis cannot swim.¹¹⁴

With two Olympics villages, training centres and competition venues, Seine Saint Denis will be central to the Olympic Games of Paris 2024. The Olympics will offer a singular chance to demonstrate what these areas have to offer and improve their image. The Athletes' Village and the Media Village will be a major urban legacy.

By their very conception, the 2024 Paris Games will emit half of the greenhouse gas emissions compared to the latest editions of the Summer Olympic and Paralympic Games. The aim is to reduce the footprint of the Games as much as possible by integrating carbon impact assessment into every decision-making process.

Right from the bidding step, Paris2024 undertook the promise not only to be the first edition in line with the Paris Agreement but also to guaranteeing carbon neutrality as early as 2021. All emissions that cannot be avoided, such as the flight-pollution caused by the transport of athletes and spectators, will be compensated through various projects such as the enlargement of the

¹¹⁴ CNOSE, The Legacy and Sustainability plan for Paris 2024 Olympic and Paralympic Games, page 14, <https://medias.paris2024.org/uploads/2021/09/Paris2024-210830-Legacy-Plan-EN.pdf>.

Olympic Forest. To encourage the use of public transport, the classic ticket for spectators will be combined with a ticket for urban public transport.

The Paris 2024 challenge is to capture more CO₂ than the Games generate by using a new *modus operandi*: from a carbon footprint forecast to a carbon budget. Instead of forecasting the Games' footprint, Paris 2024 has already fixed its "target carbon footprint". Comparable to financial budgets that need to be followed, the target carbon footprint represents a kind of carbon-budget that needs to be respected. Paris 2024 has set its target carbon footprint at 1.5 million tonnes of CO₂, 2 tonnes less than previous editions of the Games.

In line with the ambitions of the IOC and the International Union for Conservation of Nature (IUCN), the Paris Committee has developed its own systematic method to analyze environmental impact.

The method takes into account the impact of the Games developments, from the design stage up until the end of 2024. The three main ambitions to protect biodiversity and the environment are:

1. Unveil the plant and animal species that live in the site. Protecting biodiversity means taking care of all common species that are not protected but are declining, such as foxes and particular species of birds. It is this "common biodiversity" that Paris 2024 wants to highlight;
2. Protect habitats thanks to initiatives focus on maximal reuse, impact reeducation and protection of heritage, users and scenery;
3. Regenerate deteriorated ecosystems.¹¹⁵

Paris 2024 wants people to be conscious about biodiversity as a whole. The Games' planning must spearhead environmental regeneration and civic information.

According to the Circularity Gap Report 2020, the global economy consumes 100 billion tonnes of materials every year and only 8.6% of the fossil fuels, minerals and biomass that enter the economy return to it after their use.¹¹⁶

¹¹⁵CNOSF, The Legacy and Sustainability plan for Paris 2024 Olympic and Paralympic Games, page 20.

¹¹⁶ <https://www.circularity-gap.world/2020>.

Of course, a consumption model not able to reuse its resources is not sustainable in the long term. Paris 2024 has organized a simple and efficient resource management plan.

The impact of the Olympic and Paralympic Games must be used to consolidate virtuous supply chains, which can create value across the country. All contractors and suppliers are encouraged to adopt eco-design principles under the idea of circular economy. Paris2024 has elaborated its own zero waste strategy, which will compile the waste and resource-related challenges across the country, such as to limit the use of single-use plastic.

The legacy and sustainability strategy, in terms of employment, aims to: support very small business from the SSE in France; make the dialogue easier between these business and major groups and help people's employability by giving the chance to acquire skills that can be used after the Olympics.¹¹⁷

Paris 2024 has decided not to be helped just by large and mature companies but it's looking towards talent available in small and medium-size enterprises.

London 2012 and Rio 2016 showed that involving small business is possible only under the condition that the organizing committee sets a strategy not just for helping them winning the contracts, but also establishing a method to support, train and adapt these companies to the organization of the Games.

In order to support local and small business, Paris 2024 has elaborated a system to help them remove obstacles, identify innovations and create pathways between different stakeholders.

On 19 June 2018, Paris 2024, Solideo¹¹⁸, local authorities and representatives for all trade unions signed the Paris 2024 Social Charter with the aim of guiding the actions taken by the organization committee in the build up to the Games.

With this Charter, Paris 2024 supports sustainable employment and guaranteeing decent working conditions for all employees working to prepare the Olympics. The aim is to support local economic development and providing concrete solutions for making the principle of inclusive and circular economy at the center of all the works.

¹¹⁷CNOSF, The Legacy and Sustainability plan for Paris 2024 Olympic and Paralympic Games, page 49.

¹¹⁸ It's the organization in charge to ensure the delivery of venues and infrastructures and the completion of redevelopment operations necessary for the Paris 2024 Games. Solideo is the investor, developer and supervisor of venues and infrastructures. <https://www.ouvrages-olympiques.fr/en/home>.

One of the initiatives taken is the *Enterprises 2024 Platform*, a platform set up by MEDEF¹¹⁹ with the support of the Organization Committee and Solideo. Thanks to this project, companies can find out about the business opportunities arising from the Games. Within a long term prospective, the platform will be used after the Games to publicize tenders for other mega sport event held in France.

For what concerns gender equality, Paris 2024 will be a completely inclusive experience.

For the first time ever, at the Games in London 2012 women participated in all sports on the Olympic programme.

With the Olympic Games of Rio 2016, clear and direct measures were implemented to call out any instances of harassment and abuse but it's only with Paris 2024 that there will be a total gender equality among the 10,500 Olympic athletes. In collaboration with the French State, Paris 2024 is the first organizer of sporting events to adopt a comprehensive and structured approach to gender equality.

The Olympic Games of Paris 2024 will be universally accessible by offering the possibility to everyone to fully participate in the Games, no matter their specific, permanent or temporary, needs related to physical, sensory or intellectual disabilities.

All venues will be accessible via public transport and *Ile-de-France Mobilités* is improving the public transportation for people with reduced mobility in order to develop new solutions so that everyone can access to the Olympic venues.

In order to respect environment, Paris 2024 has teamed up with WWF France on its programme to assist the world of sport's environmental transition.

The WWF focuses on three areas: supporting the environmental transition of sport events in France; developing active mobility and raising awareness among sport fans.¹²⁰

¹¹⁹ The largest employer federation in France.

¹²⁰ CNOSE, The Legacy and Sustainability plan for Paris 2024 Olympic and Paralympic Games, page 101.

CONCLUSION

With a brief overview on the position of the IOC on the sustainability subject, it's possible to deduct that in recent years, the sustainable factor has become of main interest for the Olympic Games, especially regarding the selection of the Host City and the concrete planning of the Games.

As it usually and unfortunately happened for major international organizations, such as the IOC, there can be a huge gap between green rhetoric and reality. In parallel of the increase concern on environmental protection and human rights respect, has grown the number of people for which these promises are nothing more than “*opium for the people*”, i.e. a non-existent foothold that society needs to reduce the immediate concern and to nurture illusions by giving the strength to pursue this path.

It is now widely accepted that mega-events such as the Olympic Games have a great impact and can leave important legacies for the organizing cities and regions, yet the actual realization of sustainable mega-sports events still remains somewhat utopian.

This may be the consequence of the apparent contradiction between these two paradigms (mega-events and sustainability). It is undoubtedly true that the high concentration implied by the Games in terms of time (a two-week event), space (a single organizing city) and investment (the operating and infrastructure costs of the Games are in the order of billions) seem to largely contradict the cornerstones of sustainable development, which advocate the distribution and sharing of environmental, social and economic impacts over time and space for the benefit of all.¹²¹

This paper highlights that considerable efforts have been made by the IOC, the host cities and the Organization Committee to ensure that the host cities and regions, as well as their citizens, are left with a positive long-term legacy.

In the face of environmental challenges, sporting events must not only assume their share of responsibility by limiting their impact, they must also go beyond this, putting the emotion and values of sport at the service of behavioral change. And it is only through joint and planned

¹²¹ FURRER P., *Sustainable Olympic Games: a dream or a reality?*

action that this system of multi-level governance can be achieved. This awareness is reflected at the highest level in the International Olympic Committee's Agenda 2020, of which Paris 2024 will be the first to implement this new model.

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REFERENCES

1. Wikimedia Foundation. (2022, August 23). *Our common future*. Wikipedia. Retrieved September 16, 2022, from https://en.wikipedia.org/wiki/Our_Common_Future.
2. *Guiding principles on business and human rights*. (n.d.). Retrieved September 16, 2022, from https://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf.
3. *United Nations Official Document*. (n.d.). Retrieved September 16, 2022, from https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=.
4. United Nations. (n.d.). *Take action for the sustainable development goals - united nations sustainable development*. United Nations. Retrieved September 16, 2022, from <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>.
5. *Welcome to the United Nations*. (n.d.). Retrieved September 16, 2022, from https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf.
6. *Welcome to the United Nations*. (n.d.). Retrieved September 16, 2022, from [https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf).
7. *The 5Ps of the sustainable development goals - ESCWA*. (n.d.). Retrieved September 16, 2022, from https://www.unescwa.org/sites/default/files/inline-files/the_5ps_of_the_sustainable_development_goals.pdf.
8. *European Green Deal - European Commission*. (n.d.). Retrieved September 16, 2022, from https://ec.europa.eu/info/sites/default/files/european-green-deal-communication_en.pdf.
9. *European Green Deal - European Commission*. (n.d.). Retrieved September 16, 2022, from https://ec.europa.eu/info/sites/default/files/european-green-deal-communication_en.pdf.
10. *Guiding principles on business and human rights*. (n.d.). Retrieved September 16, 2022, from https://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf.
11. Admin. (2016, October 20). *Assolombarda - Documenti*. Assolombarda.it. Retrieved September 16, 2022, from <https://www.assolombarda.it/servizi/credito-finanza-e-incentivi/documenti>.
13. Wileymeg. (2019, August 23). *Sports as a tool for peace*. AMUN. Retrieved September 16, 2022, from <https://www.amun.org/sports-as-a-tool-for-peace/>.
14. *Global action plan on physical activity 2018-2030*. (n.d.). Retrieved September 16, 2022, page 20, from <https://apps.who.int/iris/bitstream/handle/10665/272722/9789241514187-eng.pdf>.
17. Wikimedia Foundation. (2022, July 15). *Kalokagathia*. Wikipedia. Retrieved September 16, 2022, from <https://it.wikipedia.org/wiki/Kalokagathia>.
18. *Lex - 32022R0720 - en - EUR-Lex*. EUR. (n.d.). Retrieved September 16, 2022, from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R0720>.
20. *Global action plan on physical activity 2018-2030*. (n.d.). Retrieved September 16, 2022, from <https://apps.who.int/iris/bitstream/handle/10665/272722/9789241514187-eng.pdf>.
21. *Europarc Federation annual report*. (n.d.). Retrieved September 16, 2022, from https://www.europarc.org/wp-content/uploads/2021/06/ENG_EUROPARC-annual-report-2020.pdf.
24. Unesdoc.unesco.org. (n.d.). Retrieved September 17, 2022, from https://unesdoc.unesco.org/ark:/48223/pf0000376674_eng.
26. *Measuring the contribution of Sport to the sustainable development goals*. Commonwealth. (n.d.). Retrieved September 17, 2022, from <https://thecommonwealth.org/our-work/measuring-contribution-sport-sustainable-development-goals>.
27. World Health Organization. (n.d.). *The World Health Report 2010*. World Health Organization. Retrieved September 1, 2022, from <https://www.who.int/publications/i/item/9789241564021>.

28. *Did you know that*. Inactivity Time Bomb. (n.d.). Retrieved September 17, 2022, from <https://inactivity-timebomb.nowwemove.com/>.
29. *DAC Gender Equality Policy Marker*. OECD. (n.d.). Retrieved September 17, 2022, from <https://www.oecd.org/dac/gender-development/dac-gender-equality-marker.htm>.
30. *United Nations Official Document*. (n.d.). Retrieved August 17, 2022, from https://www.un.org/ga/search/view_doc.asp.
31. *ISO 20121 sustainable events with sustainable events with ISO 20121 ...* (n.d.). Retrieved August 26, 2022, from https://www.iso.org/files/live/sites/isoorg/files/store/fr/PUB100302_fr.pdf.
32. Internet encyclopedia of philosophy. (n.d.). Retrieved August 25, 2022, from <https://iep.utm.edu/ethics-and-contrastivism/>.
34. History.com Editors. (2010, January 6). *The Olympic Games*. History.com. Retrieved September 18, 2022, from <https://www.history.com/topics/sports/olympic-games#:~:text=The%20Olympic%20Games%2C%20which%20originated,the%20world's%20preeminent%20sporting%20competition.&text=The%20first%20modern%20Olympics%20took,nations%2C%20competing%20in%2043%20events>.
38. *In force as from 8 August 2021 Olympic Charter*. (n.d.). Retrieved September 10, 2022, pages 13-14, from <https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/General/EN-Olympic-Charter.pdf>.
39. *History*. Welcome! (n.d.). Retrieved July 6, 2022, from <https://www.deaflympics.com/icsd/history>.
40. *About the ICSD*. Welcome! (n.d.). Retrieved July 1, 2022, from <https://www.deaflympics.com/icsd>.
41. Wikimedia Foundation. (2022, May 22). *Eugène Rubens-Alcais*. Wikipedia. Retrieved July 1, 2022, from https://fr.wikipedia.org/wiki/Eug%C3%A8ne_Rubens-Alcais.
42. *History*. SpecialOlympics.org. (n.d.). Retrieved July 1, 2022, from <https://www.specialolympics.org/about/history>.
43. Wikimedia Foundation. (2022, August 25). *Paralympic Games*. Wikipedia. Retrieved July 1, 2022, from https://en.wikipedia.org/wiki/Paralympic_Games.
44. Wikimedia Foundation. (2022, July 3). *Ludwig Guttmann*. Wikipedia. Retrieved July 2, 2022, from https://en.wikipedia.org/wiki/Ludwig_Guttmann.
45. Public Broadcasting Service. (n.d.). *History of the paralympics | medal quest*. PBS. Retrieved July 2, 2022, from <https://www.pbs.org/wgbh/medal-quest/past-games/#:~:text=The%20Stoke%2DMandeville%20Games%20for,Mandeville%20Hospital's%20Spinal%20Injuries%20Unit>.
46. *Olympic charter*. (n.d.). Retrieved July 5, 2022, page 11, from <https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/General/EN-Olympic-Charter.pdf>.
49. *International Olympic Committee*. (n.d.). Retrieved July 5, 2022, from https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/IOC-Sustainability-Policy.pdf?_ga=2.207995858.1144528344.1658914986-1240183690.1653396533.
50. *IOC - International Olympic Committee*. International Olympic Committee. (2022, April 4). Retrieved July 17, 2022, page 13, from https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/sustainability-essentials/IOC-Sustainability-Essentials_v7.pdf#_ga=2.210552789.1144528344.1658914986-1240183690.1653396533.
51. *IOC - International Olympic Committee*. International Olympic Committee. (2022, April 4). Retrieved July 17, 2022, from https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/sustainability-essentials/SUSTAINABILITY-ESSENTIALS-ISSUE-2.pdf?_ga=2.2417520.1144528344.1658914986-1240183690.1653396533.

52. *IOC - International Olympic Committee*. International Olympic Committee. (2022, April 4). Retrieved July 17, 2022, from https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/sustainability-essentials/SUSTAINABILITY-ESSENTIALS-ISSUE-3-final.pdf?_ga=2.210733013.1144528344.1658914986-1240183690.1653396533.
53. *IOC - International Olympic Committee*. International Olympic Committee. (2022, April 4). Retrieved July 17, 2022, from https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/Plastic-game-plan-for-sport-guide.pdf#_ga=2.210733013.1144528344.1658914986-1240183690.1653396533.
54. *IOC - International Olympic Committee*. International Olympic Committee. (2022, April 4). Retrieved July 17, 2022, from https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/sustainability-essentials/SUSTAINABILITY-ESSENTIALS_v6.pdf?_ga=2.210733013.1144528344.1658914986-1240183690.1653396533.
55. *ISO 20121 sustainable events with sustainable events with ISO 20121 ...* (n.d.). Retrieved July 25, 2022, from https://www.iso.org/files/live/sites/isoorg/files/store/fr/PUB100302_fr.pdf.
56. *IOC - International Olympic Committee*. International Olympic Committee. (2022, April 4). Retrieved July 17, 2022, page 37, from https://stillmed.olympics.com/media/Documents/Beyond-the-Games/Sustainability/Essentials/How-to-be-a-sustainable-champion-guide.pdf?_ga=2.144581493.1144528344.1658914986-1240183690.1653396533.
57. Alexander, P., M., R., Finnigan, J., Arneith, A., & Brown, C. (n.d.). Human appropriation of land for food: the role of diet. *Global Environmental Change*. Retrieved August 5, 2022, from <http://www.sciencedirect.com/science/article/pii/S0959378016302370?via%3Dihub#bib0330>.
58. Lenzen, M., Sun, Y.-Y., Faturay, F., Ting, Y.-P., Geschke, A., & Malik, A. (2018, May 7). *The carbon footprint of Global Tourism*. *Nature News*. Retrieved August 9, 2022, from <https://www.nature.com/articles/s41558-018-0141-x>.
59. *World - CO2 emissions (metric tons per capita)2022 data 2023 forecast 1960-2019 historical*. World - CO2 Emissions (metric Tons Per Capita) - 2022 Data 2023 Forecast 1960-2019 Historical. (n.d.). Retrieved August 10, 2022, from [https://tradingeconomics.com/world/co2-emissions-metric-tons-per-capita-wb-data.html#:~:text=CO2%20emissions%20\(metric%20tons%20per%20capita\)%20in%20World%20was%20reported,compiled%20from%20officially%20recognized%20sources](https://tradingeconomics.com/world/co2-emissions-metric-tons-per-capita-wb-data.html#:~:text=CO2%20emissions%20(metric%20tons%20per%20capita)%20in%20World%20was%20reported,compiled%20from%20officially%20recognized%20sources).
61. *Home*. Big Plastic Pledge. (2019, September 14). Retrieved August 18, 2022, from <https://bigplasticpledge.com/>.
62. IOC. (2022, May 21). *Olympic champion Hannah Mills launches #BigPlasticPledge - Olympic News*. International Olympic Committee. Retrieved August 18, 2022, from <https://olympics.com/ioc/news/olympic-champion-hannah-mills-launches-bigplasticpledge>.
63. *Carbon footprint methodology for the Olympic Games / International Olympic Committee*. Olympic World Library - Carbon footprint methodology for the Olympic Games / International Olympic Committee. (n.d.). Retrieved August 18, 2022, pages 9, 16, from https://library.olympics.com/Default/doc/SYRACUSE/184686/carbon-footprint-methodology-for-the-olympic-games-international-olympic-committee?_lg=fr-FR.
65. *Adoption of the paris agreement - paris agreement text English - UNFCCC*. (n.d.). Retrieved August 18, 2022, from https://unfccc.int/sites/default/files/english_paris_agreement.pdf.
67. *The Greenhouse Gas Protocol*. (n.d.). Retrieved August 18, 2022, from https://ghgprotocol.org/sites/default/files/standards/ghg_project_accounting.pdf.

68. *Environmental footprint methods*. Environment. (2021, December 16). Retrieved August 18, 2022, from https://environment.ec.europa.eu/news/environmental-footprint-methods-2021-12-16_en#:~:text=The%20Environmental%20Footprint%20methods%20measure,methods%20agreed%20at%20international%20level.
69. *International Olympic Committee*. IOC Sustainability Report, Sharing Progress on our 2020 objectives. (n.d.). Retrieved August 20, 2022, pages 3, 9, 12, 22, 25, 29, from https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/IOC%20Sustainability%20Report_Final%20Rev1.pdf.
70. *IOC - International Olympic Committee*. IOC annual report 2017. (2017, December 4). Retrieved September 18, 2022, from <https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/Documents/IOC-Annual-Report/IOC-annual-report-2017.pdf>.
71. *International Olympic IOC Sustainability Report 2021 - Olympic Channel*. (n.d.). Retrieved August 17, 2022, from <https://stillmed.olympics.com/media/Documents/News/2021/12/IOC-Sustainability-Report-2021.pdf>.
76. *Dow Carbon Report, 2020*. Dow Carbon Report. (n.d.). Retrieved August 18, 2022, from <https://corporate.dow.com/en-us/about/partnerships/sports/sustainability/ioc-carbon-partner/carbon-report-2020/0001.html>.
78. Ioc. (2022, May 21). *IOC joins forces with OECD under new agreement - olympic news*. International Olympic Committee. Retrieved September 1, 2022, from <https://olympics.com/ioc/news/ioc-joins-forces-with-oecd-under-new-agreement>.
79. *"earth school" launches to keep students connected to nature in the time of covid-19*. UN Environment. (n.d.). Retrieved September 1, 2022, from <https://www.unep.org/news-and-stories/press-release/earth-school-launches-keep-students-connected-nature-time-covid-19>.
81. Ioc. (2022, September 1). *IOC Young leaders programme*. International Olympic Committee. Retrieved September 18, 2022, from <https://olympics.com/ioc/sport-and-active-society/young-leaders>.
82. Ioc. (2022, May 21). *IOC reveals details of its "olympic forest" Project - Olympic News*. International Olympic Committee. Retrieved September 1, 2022, from <https://olympics.com/ioc/news/ioc-reveals-details-of-its-olympic-forest-project>.
88. *IOC - International Olympic Committee*. Future Host Questionnaire Olympic Games. (2022, April 4). Retrieved September 15, 2022, pages 3, 9, from https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/Games/Future-Olympic-Hosts/Future-Host-Questionnaire-Olympic-Games.pdf?_ga=2.187703848.1806718809.1646303217-546605108.1640074831.
91. *Guiding principles on business and human rights*. (n.d.). Retrieved September 11, 2022, from https://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf.
92. *IOC*. Candidature-Acceptance Procedure for the Games of the XXX Olympiad 2012. (n.d.). Retrieved September 15, 2022, pages 21-22, from <https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/Documents/Host-City-Elections/XXX-Olympiad-2012/Candidature-Acceptance-Procedure-for-the-Games-of-the-XXX-Olympiad-2012.pdf>.
93. *IOC*. Candidature-Acceptance Procedure for the Games of the XXXIII Olympiad 2024. (n.d.). Retrieved September 15, 2022, pages 4, 81, from https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/Documents/Host-City-Elections/XXXIII-Olympiad-2024/Candidature-Questionnaire-for-the-XXXIII-Olympiad-2024.pdf?_ga=2.16217139.423277909.1661178038-1240183690.1653396533.
98. *Business in new South Wales - business in New South Wales*. NSW Department of Industry. (2020, April 23). Retrieved September 10, 2022, from <http://www.business.nsw.gov.au/olympicsreport>.
101. Roper, T. (2002). *The Sydney Olympics and their Impact on Development of large cities*. Metropolis. Retrieved September 9, 2022, from

- <https://www.metropolis.org/sites/default/files/resources/The-impact-of-major-events-on-the-development.pdf>.
103. *Rio's Olympic Aquatic Centre left in ruins after grand promises*. (n.d.). Retrieved September 5, 2022, from <https://www.news.com.au/sport/sports-life/rios-olympic-aquatic-centre-left-in-ruins-after-grand-promises/news-story/f0d7a5aedfd314c41ae42f66b98d5ca3>.
 104. Owen, K. (2001). *The local impacts of the Sydney 2000 Olympic Games: Processes and ...* Retrieved September 7, 2022, from https://www.researchgate.net/publication/240623018_THE_LOCAL_IMPACTS_OF_THE_SYDNEY_2000_OLYMPIC_GAMES_PROCESSES_AND_POLITICS_OF_VENUE_PREPARATION.
 105. Furrer, P. (1970, January 1). *Sustainable olympic games a dream or a reality: Semantic scholar*. undefined. Retrieved September 7, 2022, from <https://www.semanticscholar.org/paper/Sustainable-Olympic-Games-A-dream-or-a-reality-Furrer/a563bd667f445c5bf8ccd1bdae3944067549dc22>.
 106. Curi, M., Knijinik, J., & Mascarenhas, G. (n.d.). *The Pan American Games in Rio de Janeiro 2007: Consequences of a Sport Mega-Event in a BRIC Country*. Retrieved September 22, 2022.
 107. Konchinski, V. (2016). *Rios Rescinde Contrato e Abandona Ultimo Legado Ambiental da Olimpiada*. <https://doi.org/http://olimpiadas.uol.com.br/noticias/2016/03/17/rio-rescinde-contrato-eabandona-ultimo-legado-ambiental-da-olimpiada.htm>.
 109. Hodges, E. (2014). *The Social and Environmental Costs of Rio's Olympic Golf Course*. *Rio on Watch*.
 111. *Queen Elizabeth Olympic Park*. Queen Elizabeth Olympic Park. (2022, September 5). Retrieved August 22, 2022, pages 4-5, from <https://www.queenelizabetholympicpark.co.uk/>.
 112. IOC. (2022, January 6). *London 2012's Sustainability Legacy Lives On*. International Olympic Committee. Retrieved August 22, 2022, from <https://olympics.com/ioc/news/london-2012-s-sustainability-legacy-lives-on>.
 113. Lebleu, T. (2019, June 7). *Paris 2024*. Retrieved August 23, 2022, from https://solarimpulse.com/actualites/recherche?_method=POST&news-year%5B0%5D=2019&news-category=0&news-author=4&page=3.
 114. *The Legacy and Sustainability Plan for Paris 2024 Olympic and Paralympic Games*. (n.d.). Retrieved September 10, 2022, pages 14, 20, 49, 101, from <https://medias.paris2024.org/uploads/2021/09/Paris2024-210830-Legacy-Plan-EN.pdf>.
 116. *The world is now only 8.6% circular - CGR 2020 - circularity gap reporting initiative*. The world is now only 8.6% circular - CGR 2020 - Circularity Gap Reporting Initiative. (n.d.). Retrieved September 10, 2022, from <https://www.circularity-gap.world/2020>.
 118. *Ouvrages Olympiques*. (n.d.). Retrieved September 15, 2022, from <https://www.ouvrages-olympiques.fr/en/home>.

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